CLINICAL DERMATOLOGY

Clinical Dermatology

For Students and Practitioners

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To our former teachers

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FOREWORD

So frequently in medical practice the first clue to the nature of the underlying disease may be derived from proper inspection and interpretation of the cutaneous manifestation. The skin, as one of the body tissues, is subject to the same physiologic and pathologic stresses and alterations observed in other vital organs. Characteristic morphologic dermatologic abnormalities which are readily accessible to analysis by biopsy may clarify the nature of puzzling disorders such as connective tissue, metabolic, infectious, neoplastic and degenerative diseases. Regional pigmentation may indict the adrenal cortex, and characteristic telangiectasia may direct attention to the liver or to the cause of abnormal intestinal bleeding. Specific microorganisms such as *Neisseria intracellularis* may be detected in petechial lesions within minutes after their appearance. The practitioner must gain a full understanding of specific skin disorders as well as an awareness of the dermal abnormalities which represent only one facet of underlying disease.

This new text on clinical dermatology provides an opportunity to welcome a monograph devoted to the clinical manifestations of skin disease and the underlying anatomic and pathologic alterations. The authors, drawing from their vast clinical experience, have prepared a text which is suited ideally as a primer in dermatologic diagnosis for the medical student primarily. Moreover the seasoned internist will find much helpful information, particularly from the illustrations, which demonstrate vividly the dermatologic manifestations that are frequently a sequel to underlying abnormalities. The technique of conducting a comprehensive history and physical examination is emphasized and the physician confronted with a skin problem is given a proper guide for a comprehensive diagnosis.

There are many helpful aids in the form of charts and tables designed to simplify differential diagnoses, methods of laboratory detection and management. Much clinical data is tabulated which is valuable for the beginner. Concise clinical descriptions of specific skin diseases provide full coverage including definitive comments on etiologic factors as they are understood currently. A useful glossary of treatment aids is provided. Simplified techniques for skin biopsy and for microscopic and cultural detection of mycotic agents are valuable contributions.

Congratulations are due the authors for their monograph which is readable and assembles pertinent information necessary for precise dermatologic diagnoses. The skin is placed in its proper perspective as a unit of the whole system and not as an isolated part.

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PREFACE

Morphologic dermatology was taught effectively at the University of Maryland School of Medicine for many years under the supervision of Dr. Harry M. Robinson, Sr. The present members of the staff of the Division of Dermatology have collaborated in the writing of this text in order to carry on this tradition.

During World War II there was a rebirth of interest in dermatology. It became apparent to those interested in this field that a dermatologist must not be solely dependent on a casual visual examination but must study the entire patient in order to arrive at a definite diagnosis. The diagnostician should not be content with the clinical impression afforded by morphologic skin changes but, through experience gained by years of study and practice, must correlate laboratory findings and clinical symptoms.

The skin is not only a protective covering but is a functioning organ which has nervous, vascular and hormonal communications with the viscera, central nervous system, and the vascular system. It is the largest organ in the human body and frequently reflects disturbances in normal physiologic functions, or pathologic changes elsewhere in the body.

The art of diagnosis applied to dermatology requires careful, patient inspection by the examining physician and a detailed record of abnormal findings. The major portion of the book is devoted to a discussion of the morphologic appearances of the more common dermatoses, methods of diagnosis, the relationship of cutaneous lesions to systemic disease, and suggestions for treatment. Brief mention is made of the more uncommon dermatoses.

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Mrs. Sylvia Ish, secretary of the Division of Dermatology, spent many laborious hours typing the manuscript.

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CONTENTS

PART 1

General Considerations

Chapter 1

ANATOMY OF SKIN

The skin is the largest organ in the human body and completely envelops all other anatomic structures. At the mucocutaneous orifices it becomes continuous with mucous membranes through transitional epithelium. Its complicated structure contains blood and lymph vessels, nerves and specialized dermal appendages. It is thickest on the palms and soles and thinnest on the eyelid. Dermal appendages are specially distributed to meet the needs of the area. The palms and soles contain eccrine sweat glands but no sebaceous glands, whereas the axillae and genital area contain a predominance of apocrine sweat glands. The face, scalp and upper back are rich in sebaceous glands.

Histologically the skin is divided into three layers: the epidermis (the outermost layer), the corium (true skin), and the subcutaneous tissue (fatty layer).

Epidermis. The epidermis consists of four strata.

1. The basal layer or *stratum germinativum*. This is the innermost layer of the epidermis and consists of a single layer of columnar cells, arranged perpendicularly to the surface. All of the other layers of the epidermis are formed from these cells which undergo morphologic and nuclear changes as they progress toward the most superficial layer. As long as this layer of cells remains intact the epidermis will regenerate without scar formation.

2. *The stratum granulosum*.

3. *The stratum lucidum*.

4. *The stratum corneum*. The stratum corneum is the outermost layer of the epidermis and is formed of keratinized cells in which the nuclei are not normally present.

Dermis. The dermis or true skin is collagenous tissue which contains white and yellow elastic fibers. It is divided into the papillary portion (closest to the epidermis) and the reticular portion which lies between the papillary portion and the subcutaneous tissue. The capillary loops in the papillary bodies (ridges of the corium in apposition to the basal layer of the epidermis) join the larger blood vessels in the reticular portion, and these graduate into large arteries and veins in the subcutaneous tissue. Nerves, sweat glands, and sebaceous glands are found in the corium.

Subcutaneous tissue. This layer of the skin consists of fat cells in a fibrous tissue stroma. Large arteries, veins, lymphatics and nerve trunks are found in this layer. Some sweat glands also extend into the subcutaneous tissue. The subcutaneous tissue varies in thickness in different parts of the body.

Appendages. The appendages of the skin are hair, nails, sebaceous glands, sweat glands, and mammary glands.

Nail. The nail plate arises from the proximal nail fold and is adherent to the nail bed. It grows continuously at the rate of approximately 1.0 mm. a week unless inhibited by some pathologic process. The nail plate is composed of hard keratin.

Hair. The hair arises from a papilla located in the lowermost portion of the *hair follicle*. The portion of the hair contained within the follicle is known as the *root*. The lowermost portion of the hair root arising from the papilla is known as the hair bulb. The hair shaft is the portion extending from the *opening of the follicle*. It grows at the rate of about 3.0 mm. a week. There are two general types of hair: (1) the fine lightly pigmented type (lanugo) and (2) the coarse pigmented terminal hairs.

Sebaceous gland. Sebaceous glands, classified as holocrine glands, arise from follicle walls

Chapter 2

PHYSIOLOGIC AND CHEMICAL FUNCTIONS OF THE SKIN

The skin, the largest organ of the human body weighs from 6 to 16 per cent of the total body weight The surface area of an adult s skin, which approximates two square yard is increased by n agination of the hair follicles. This large sur face offers a passage for percutaneous absorption of many topically applied substances. The permeability of the integument is important in pharma cology toxicology physiology and clinical dermatology The skin is the external sheath which protects man from his environment. The sensory nerve endings of the kin transmit pain touch temperature changes, and other signals.

PRINCIPAL FUNCTIONS OF THE SKIN

Protection

The skin is the elastic, resistant covering organ which serves to protect man from the complex en ironment in which he lives It prevents the passage of harmful physical and chemical agents and inhibit excessive loss of water and essential electrolytes.

Thermoregulatory Function

Heat is lost from the body by *conduction convection radiation*, and *evaporation* The rela ti e importance of these mechanisms varies with such external conditions as temperature humidity clothing, and movement of air

Conduction The poorest conducting layers of the skin are the horny layer and the adipose tissue The corium is a better heat conductor than either the epidermis or the fatty layer and tends to equalize the temperature differences between these two

Con ection This is constant source of heat loss. The thin layer of air in direct contact with the skin warm up rapidly and is replaced by cool and dry air At air temperatures higher than 95°F the heat loss by convection is negl gible The convection effect increases with movement of the air

E aporation Water loss from the skin ha been divided into two categories (1) Insensible water loss frequently referred to a insensible perspiration and (2) Visible water loss, the active secretion of the eccrine sweat gland commonly referred to a *sweat or perspiration*

Radiation heat loss This varies with different individuals and with different postures.

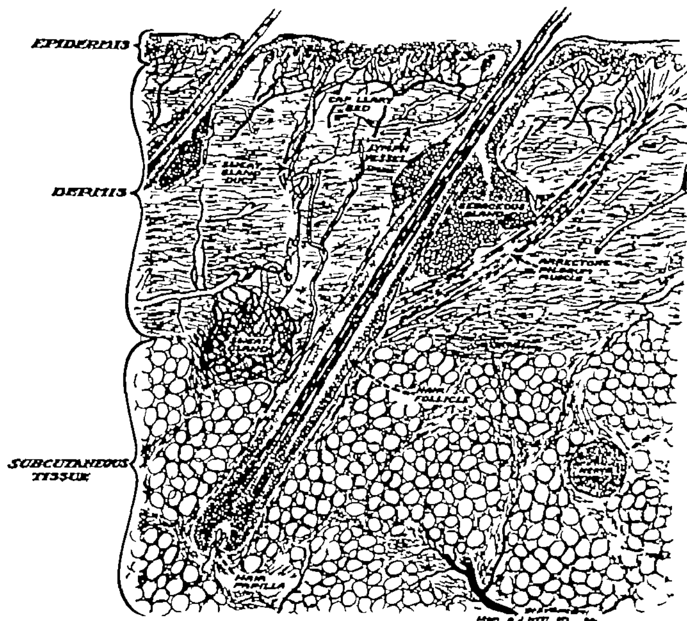
Sensation

The four basic sensations of pain, temperature touch and pressure are perceived in the skin Modifications of these basic sensations are (1) hot sensation which results from simultaneous stimulation of the end organs for warmth and cold (2) the sense of vibration and (3) *tickling* and itching which are mediated by pain fibers. The ability to discriminate between sensation *is* a result of the pattern presented to the cerebral cortex

Receptors	Sensations
Meissner' corpuscles	Touch pressure
Merkel disc (round hair follicles)	Touch-pressure
Ruffini ending	*Heat*
Krause end bulbs	*Cold*
Free nerve endings	Pai
Pacinian corpuscles Golgi Mazzoni corpuscles	Pressure

Secretory Mech nism

The skin plays a minor role in the excretory functions of the body Sebum, secreted by *the* sebaceous glands, has some antifungal and anti-



NORMAL SKIN ANATOMY

Fig. 1. Diagram of normal skin anatomy

These structures produce sebum, the substance primarily responsible for lubrication of the skin surface. This oily material is emptied on to the skin through the follicle orifice. Each gland has a rich vascular supply.

Sweat glands. Sweat glands (coil glands) are of two types: (1) apocrine sweat glands and (2) eccrine sweat glands.

Apocrine sweat glands. These are located in the axillae, the areolae of the nipples, about the umbilicus, the perianal region and the genital region. The mammary gland is formed from a group of apocrine glands for specialized function. The maturation of apocrine glands is dependent on hormonal activity. These glands do not function until puberty.

Eccrine sweat glands. These coil glands have as their primary function the elimination of fluid and nitrogenous waste products. Each gland is surrounded by a rich capillary anastomosis.

Muscles of skin. Arrectores pilorum muscles are bundles of smooth muscle fibers attached to hair follicles. When these contract the skin has the so-called "goose-flesh" (cutis anserina) appearance. Striated muscles in the skin are limited to the face and neck.

Thyroid. The role of the thyroid in the production or control of pigmentation in the mammal is questionable

Adrenal glands. The adrenal gland are the most important endocrine glands in the control of pigmentation in the mammal because of the inhibitory or balance effect on the production of MSH from the pituitary. If the adrenals are hypoactive or nonfunctioning as in Addison's disease, MSH is produced in large quantities and abnormal pigmentation results.

Sex glands. Gonadal secretions promote pigment formation.

SEBACEOUS SECRETION

The substance which forms the "surface film of the body is derived from sweat sebum, and desquamating epidermal cells. Sweat may be obtained in its pure form. The amount of sebum secreted is usually 1 or 2 gm. per day for the entire body

Distribution. The sebaceous glands are holocrine glands which usually develop by the fifth fetal month. They are distributed over the entire skin surface except the palms and soles. These glands are most numerous on the scalp forehead, nose, cheeks and chin, and are also abundant on the chest and shoulders. Modified sebaceous glands on the penis produce smegma and in the ear canals produce wax. The Meibomian glands of the eyelids are also variants of these glands. The mammary glands are variants of apocrine glands, not sebaceous glands

Factors influencing sebum production. The two most important factors controlling the production of sebum are the atmospheric temperature and hormonal factors. There is no direct nerve control.

Sebum is a fluid or semisolid oily material which is deposited on the skin surface. When the external temperature increases, the viscosity of sebum decreases and the rate of flow is increased. Hormones play an important role in the production of sebum. Testosterone and progesterone are potent sebaceous gland stimulants.

Sebum is composed of waxes triglycerides cholesterol and squalene

CHEMISTRY OF THE CORIUM

The corium is composed of collagen reticulum, elastin and ground substance. These substances, like keratin, belong to the albuminoids and are composed of long chains of amino acids joined together by a peptide linkage

The most important amino acid in collagen is glycine. Collagen is attacked by pepsin but is resistant to trypsin. Collagen fibers when heated become rubbery and contract

Reticulum. Reticulum is immature collagen formed by fibroblasts. Elastic fibers comprise only a small percentage of the corium and can be differentiated from collagen fibers by their resistance to pepsin boiling water and boiling dilute acids. Elastic tissue is an incomplete protein which lacks many of the essential amino acids

Ground substance. This is an organized network of protein molecules filled with hyaluronic acid, a mucopolysaccharide which contains hexosamine glucosamine uronic acid, and acetyl groups.

bacterial properties and also plays a role in maintaining the texture of the skin

Sweat *is a true secretion* Chart 1 compares the concentrations of electrolytes in blood plasma and sweat

Chart 1

	Blood plasma		Sweat	
	mEq /L	gm. %	mEq /L	gm. %
Na	130	0 32	10–102	0 0[illegible]–0 23
Cl	103	0 36	8–100	0 0[illegible]–0 3[illegible]0
K	4	0 015	4 11 6	0 015–0 045
Urea (as urea nitrogen)	—	0 012	—	0 03
Lactate	—	0 023	—	0 0[illegible]–0 30

Percutaneous Absorption

The skin is the armor protecting the deeper tissues from trauma and desiccation The oily surface film makes the skin water repellent The constant desquamation of the horny layer retards the inward movement of materials which come in contact with the skin. The skin is permeable however *and may be envisaged as a* sieve-like membrane in which the numerous follicular orifices are channels for absorption *The stratum corneum plays a minor role as a* barrier to absorption and hyperkeratosis does not retard transfer rates. The actual barrier to nearly all substances consists of the stratum lucidum and stratum granulosum The appendages especially the pilosebaceous apparatus account for the major part of absorption since they do not contain these impermeable strata *The epidermis is not supplied with blood vessels* but the upper dermis has both a rich capillary bed and lymphatic drainage and therefore material which penetrate into the corium are absorbed

All substances which pass through normal human skin are soluble in fat or water Vehicles such as ointments or solvents may act as either transport systems or simply bring the active *ingredient in contact with the skin*

Experimental evidence indicates that normal intact human skin is usually impermeable to water electrolytes carbohydrates fat and protein however all true gases and many *vaporized or volatile substances* will pass through the epidermis.

Mercury lead copper arsenic and bismuth penetrate the skin under certain *conditions, and sex* hormones are readily absorbed when applied in a solvent vehicle

Keratinization Process

Keratinization is the most important function of epidermal cells. It is the process of transformation of living epithelial cells into a horny substance called *keratin*

The basic change takes place in the globular protein particles of the epidermal cell which are transformed through a process of oxidation dehydration and loss of cellular structure *This cell death occurs continuously during the physiologic* transformation of prickle cells into the cells of the stratum corneum

Hair growth is also a part of the keratinization process but it varies in different region of the body It is most rapid on the chin (0 38 mm per day) less on the scalp (0 35 mm per day) axilla (0.30 mm per day) thigh (0 20 mm per day) *and eyebrow (0 16 mm per day) The growth is* more rapid in summer than in winter After the third decade the rate of growth declines slightly

Pigmentation

Pigmentation is of genetic origin Hyperpigmentation is produced by trauma irradiation exposure to the elements, or inflammation

The formation of pigment *Tyrosine* is believed to be the pigment precursor from which the normal skin pigment develops It is probably *formed from the essential amino acid* phenylalanine Tyrosine is first oxidized to DOPA (dihydroxy phenylalanine) by the enzyme tyrosinase *DOPA* is then transformed through a series of oxidation and reduction reactions to an indole compound *hallachrome red* polymerization of which forms melanin

Pigmentation and hormones

Pituitary gland The hypophysis influences pigmentation by its control over other endocrine glands and *through the products* of the intermediary lobe of the melanocyte stimulating hormone (MSH)

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Chapter 3

ETIOLOGY OF DERMATOSES

Etiology is the science of investigation of the causes of disease. As the knowledge of pathologic physiology increases, it becomes more obvious that etiology and diagnosis are inseparable. The practitioner must make every effort to understand the nature of a condition, to discover its cause, *and thereby establish the correct diagnosis.* When the cause of an eruption has been determined, some rational form of therapy may be devised, but when the etiologic agent is obscure, the physician must resort to the use of empiric measures.

A multiplicity of factors may combine to produce an eruption. Eczema (atopic dermatitis, lichenified dermatitis, lichen simplex chronicus, neurodermatitis) may have been caused originally by some endogenous or exogenous sensitizing substance; however, the ultimate picture is caused by a combination of endogenous factors, exogenous factors, and emotional stimuli. This syndrome may be complicated further by superimposed pyogenic infection produced by local inoculation (scratching).

The etiology of dermatoses is divided into precipitating causes (those factors actually causing the disease or pathologic state) and predisposing causes (nonspecific factors which contribute to the development of an eruption).

PREDISPOSING CAUSES

Predisposing causes are those factors which lower the resistance or increase the susceptibility of the skin to attack. Many eruptions are secondary manifestations of some internal disorder.

Age. Some eruptions develop only at certain periods of life. Ichthyosis, impetigo neonatorum, and epidermolysis bullosa appear in infancy. Verruca vulgaris, impetigo contagiosa, *ecthyma, and* tinea capitis are primarily diseases of childhood. The adolescent boy or girl is prone to develop acne vulgaris, seborrhea oleosa, and psoriasis. Kraurosis vulvae, carcinoma, and senile keratoses are conditions commonly seen in the aged.

Sex. Lupus erythematosus, chloasma, Paget's disease of the nipple, and herpes gestationis occur most commonly in the female, whereas epitheliomas, seborrheic keratoses, rosacea, and occupational dermatoses occur more commonly in the male.

Race. The importance of race as a predisposing factor in the cause of disease has decreased in the past three decades. Because of an intermingling of peoples of all races and nationalities, pure racial characteristics have been greatly diluted. It is not true that pemphigus vulgaris is a disease limited to the Jewish race *or that psoriasis and* epitheliomas do not occur in the Negro. It is true, however, that persons of Negro extraction are prone to develop keloids, acne keloid, dermatosis papulosa nigra, and granuloma inguinale.

Heredity. Ichthyosis, trichoepithelioma, psoriasis, and keratosis palmaris et plantaris are *familial conditions. There is a definite hereditary* tendency to the development of the hay fever, asthma-eczema syndrome.

Seasonal. Miliaria rubra, erythema solare, larva migrans, and insect bites are most commonly seen during the summer months. Cold weather produces or aggravates conditions such as ichthyosis, *psoriasis, and winter eczema.*

Occupation. An occupational dermatosis may be defined as an eruption produced by a substance or substances encountered by the patient during the course of his work. A previously existing eruption aggravated by working conditions is also considered by state industrial *accident commissions as a compensable occupational* disease.

Organic diseases. Erythema nodosum purpura tuberculosis cutis atopic eczema xanthomata, furunculosis, urticaria pigmentosa erythema multiforme pseudoxanthoma elasticum, and many other lesions are cutaneous manifestations of systemic disease

PRECIPITATING CAUSES

Trauma Trauma inflicted by physical violence chemical burns, sunlight, heat and physical therapy may be productive of an eruption Externally produced injury is frequently a means of introducing pathogenic microorganisms into the skin.

Animal parasites These frequently cause skin eruptions which have characteristic morphologic features.

Pediculus capitis *Pediculus pubis*, and *Pediculus corporis* (Fig. 2) are insects which bite and suck blood but do not inject a foreign substance The body louse (*P corporis*) transmits epidemic typhus, trench fever and other infections through its fecal matter

Cimex lectularius (bed bug) makes its home in crevices of furniture and uses the human body for feeding purposes. A transitory wheal develops following the bite (probably caused by an irritating substance injected by the insect) The lesions are extensive and heavily crusted Secondary pyogenic infection frequently develops.

Pulex irritans (flea) is one of the more common causes of papular urticaria in children. The lesions are small papules or vesicopapules. Intense itching occurs because of the irritating substance injected by the insect Fleas transmit endemic typhus, bubonic plague and other infections

Tunga penetrans (chigoe) is a flea The female of the species burrows into the skin producing a large papule with a central puncture blocked by a portion of the body of the parasite. Extensive secondary infection and gangrene may result from chigoe infestation. This condition which is limited to tropical America, primarily involves the feet

Ancylostoma braziliense and *Gastrophilus hemorrhoidalis* cause "creeping eruptions" called larva migrans The larvae of the insects produce a continuous red, tortuous thread like burrow in the skin marking their line of migration just beneath the stratum corneum.

Endamoeba histolytica may produce cutaneous involvement by extension or inoculation An amebic dermatitis may develop in the skin following a surgical procedure on a visceral abscess. Extension of rectal disease onto the skin about the anus may produce extensive ulcers or furuncles Amebic ulcers in the skin are *irregular* purulent lesions with undermined ragged edges. The organism may be recovered from the ulcers.

Trichinella spiralis causes cutaneous lesions resembling erythema multiforme "rose spots" or scarlatiniform erythema. Edema of the eyelids, petechiae and urticaria are also common findings.

Wuchereria bancrofti causes human filariasis, a tropical disease The scrotum, breast and lower



Fig 2 *Pediculus capitis* (head louse) and ovum

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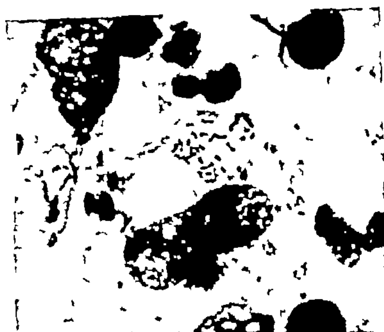
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Seasonal. Miliaria rubra, erythema solare, larva migrans, and insect bites are most commonly seen during the summer months. Cold weather produces or aggravates conditions such as ichthyosis, psoriasis, and winter eczema.

Occupation. An occupational dermatosis may be defined as an eruption produced by a substance or substances encountered by the patient during the course of his work. A previously existing eruption aggravated by working conditions is also considered by state industrial accident commissions as a compensable occupational disease.



F 4. *Donovania granulomat*

minor abrasion or tick bite The tularemic chancre frequently develops about the fingers and hands. Following this, regional lymph nodes become involved Many different types of cutaneous lesions may complicate the systemic picture of this disease

Hemophilus ducreyi is the Gram-negative bacillus which causes chancroid This condition is described in the chapter on Venereal Diseases.

Corynebacterium d phtheriae causes d phtheria. Diphtheria of the skin usually complicates a pre-existing erupt on. During the war years it was commonly seen complicating ecthyma, epi dermophytosis, and eczematous eruptions

Mycobacterium t berculosis causes tuberculosis. The cutaneous lesions of tuberculosis may be primary or secondary Localized lesions may develop and become progressive in the absence of adequat immunity The patient with miliary tuberculosis may develop hematogenous spread involving the skin. Tuberculids are cutaneous manifestations of sensitivity to the tubercle bacillus.

Mycobacterium lepra is the organism which causes leprosy

Donov nia granulomatis i the encapsulated bacterium which causes granuloma inguinale (Fig. 4) Th condition i discussed in the chapter on Venereal Diseases

Treponema perten e is the spirochaete which causes yaws a tropical disease

T eponema pallid m is the spirochaete which causes syphilis. This is discussed in the chapter on Venereal Diseases



F g. 5. Direct microscopic examination from case of epidermophytosis (ink potassium hydroxide)

extremities may develop elephantiasis. Lymphadenitis and funiculitis also occur

Latrodectus mactans, the black widow spider produces a painful edematous lesion which may also be purpuric. Systemic symptoms, including tremors, numbness, vomiting and general malaise, are frequently violent. Fatalities are rare.

Tick bites may produce cutaneous nodules which do not resolve when the acute inflammatory reaction subsides. In this country *Dermacentor andersoni* and *Dermacentor variabilis* are vectors of Rocky Mountain spotted fever and tularemia.

Sarcoptes scabiei (itch mite) (Fig 3) The female of the species burrows under the skin and deposits eggs and fecal matter The male usually lives on the skin or under the epidermis outside the burrows This contagious disease has diminished in incidence during the past 10 years.

Pediculoides ventricosus (grain-itch mite) attacks people who work with grain It produces papular or papulovesicular urticaria with intense itching and sometimes fever

Trombicula irritans is the common American chigger Only the larvae of these mites are parasitic The adult mite lives on woody decaying substances During the summer months they are commonly found in the grass bushes and fields.

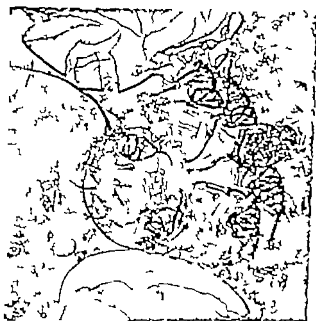


Fig 3 *Sarcoptes scabiei* in vesicle top (stained with ink potassium hydroxide)

The lesions produced are hemorrhagic papules. Itching is intense

Euproctis chrysorrhoea (larva of the brown-tail moth) causes caterpillar dermatitis, common in Massachusetts and other parts of New England. The pruritic, erythematous dermatitis and urticaria are caused by the nettling hair of the caterpillars.

Culicidae (mosquitoes) have numerous species and produce itching urticarial lesions caused by the injection of venom. Some patients develop severe generalized allergic reactions to mosquito bites.

Hymenoptera include bees, hornets, wasps, and some members of the family of ants These insects may produce prolonged urticaria and serious systemic illness because of the venom injected

Viruses Viruses are organized living bodies which are not visible under the ordinary microscope They may be cultured on tissue culture media but not on any type of cell-free medium. Viruses must live within a cell and although they are microorganisms they differ from bacteria in important and characteristic ways

Smallpox alastrim milker's nodes, varicella rubeola rubella herpes simplex, herpes zoster Kaposi's varicelliform eruption warts of all types molluscum contagiosum lymphogranuloma venereum and cat scratch disease are among the many dermatoses caused by viruses

Rickettsiae Unlike viruses, these intracellular parasites are visible with standard microscopic techniques. Epidemic typhus, murine typhus, Rocky Mountain spotted fever rat-mite dermatitis, and rickettsial pox are caused by specific rickettsiae

Bacterial infection

Staphylococcic infections include impetigo contagiosa furuncles and carbuncles cellulitis, folliculitis and secondary pyogenic infection of eczematous eruptions.

Streptococcic infections include secondary pyogenic infection of previously existing dermatoses, impetigo contagiosa ecthyma erysipelas scarlet fever gangrenous balanitis, and other dermatoses.

Erysipelothrix rhusiopathiae causes erysipeloid

Pasteurella tularensis causes tularemia The organism usually enters the body through a

Chapter 4

DIAGNOSTIC PROCEDURES

A combination of history physical examination, and judicious use of laboratory procedures is necessary to make a dermatologic diagnosis. The examiner must be a competent observer having a thorough knowledge of subjective and objective symptoms. In many instances the impression gained from physical examination contradicts the history obtained from the patient. A systematic method of examination is essential.

MEDICAL HISTORY

The history should be obtained with the same care used in obtaining information from a patient with a systemic disease. Poorly organized interrogation seldom elicits the necessary information. Occupational diseases, allergic dermatoses, infectious diseases, psychogenic disorders and constitutional diseases require different types of questions.

Subjective symptoms are disturbances of sensory perception which are not seen or felt by the examiner. These are itching, burning, pain, formication, tingling, hyperesthesia, anesthesia, and paresthesia. These symptoms vary in degree and intensity with the individual patient. The emotional stability of the patient must be considered in the evaluation of such complaints. A psychotic person who has delusions of parasitosis may have intense itching even though no parasites are present, whereas a phlegmatic individual with scabies may complain of only slight discomfort.

After the routine medical history has been obtained, the following specific questions regarding dermatoses are suggested.

How long has the eruption been present?

Has anyone else in the *family* had similar condition?

Have there been previous attacks of this or similar eruptions?

Has medicine been administered by mouth or by injection recently?

What medications have been used to relieve symptoms, have headache remedies or laxatives been taken?

Have x-ray or other light treatment for this or other conditions ever been given?

What brand and type of cosmetics are used?

What type of work is done? How long has it been done?

What are the hobbies?

Are working conditions pleasant?

Do the working conditions aggravate the eruption?

Does soap aggravate the eruption?

Is the condition worse in summer or winter?

What are the sleeping habits?

What are the smoking habits?

What are the whiskey drinking habits?

What are the coffee drinking habits?

Do any foods seem to cause the skin to "break out"?

Are domestic relationships pleasant?

PHYSICAL EXAMINATION

As part of the general examination the practitioner should consider the gait, manner of speech, presence or absence of tremors, and the general color and tone of the skin. The examiner should attempt to estimate the patient's physical age by considering the condition of the hair, elasticity and general condition of the skin, and the presence or absence of arcus senilis. A complete physical examination is desirable. Careful scrutiny of the disrobed patient in good light is essential. Daylight is the most satisfactory source

Fungi The mycoses, both superficial and deep are caused by fungi The superficial mycoses include tinea capitis, epidermophytosis (Fig 5) tinea versicolor and other cutaneous lesions which do not have systemic manifestations. Among the deep mycoses are histoplasmosis blastomycosis coccidioidomycosis and sporotrichosis. These conditions are discussed in more detail in the chapter on Mycology

Metabolic disorders The dermatoses attributable to metabolic disorders include the xanthomas Addison's disease acanthosis nigricans, gout amyloidosis hemochromatosis, calcinosis, porphyria pellagra and endocrine disturbances.

Allergy Endogenous allergic reactions are attributable to the existence of a state of specific hypersensitivity to some injected ingested or inhaled substance The clinical manifestations vary and include such morphologic lesions as purpura erythema multiforme urticaria exfoliative dermatitis, and scarlatiniform eruptions Exogenous causes of allergic reactions include a large variety of substances which come in contact with the skin and to which a patient may become sensitized

Congenital abnormalities These include ichthyosis nevi congenital ectodermal defect epidermolysis bullosa polydactylia mongolian spots and disturbances of growth

Vascular lesions Those which produce skin changes include embolism thrombosis, arteritis, phlebitis, arteriosclerosis, and angiospasm.

Hematopoietic disorders Those disorders productive of eruptions include lymphosarcoma Hodgkin's disease lymphatic or myeloid leukemia, and monocytic leukemia. The skin lesions include petechiae, pigmentation, stomatitis, herpes zoster furunculosis lichenified dermatitis and urticaria

Emotional disturbances These are capable of producing or aggravating dermatoses. Psychogenic stimuli produce neurotic excoriations, factitious dermatitis, trichotillomania pruritus ani and pruritus vulvae delusions of parasitosis and other conditions. Chronic dermatoses such as eczema dermatitis herpetiformis, and psoriasis are frequently aggravated by psychogenic stimuli.

Neoplastic diseases These include epitheliomas (basal cell squamous cell and transitional) sarcoma of the skin multiple hemorrhagic sarcoma of Kaposi lymphoblastomas, melanomas, metastatic malignancies in the skin eosinophilic granulomas, and other malignant and nonmalignant tumors

Dermatoses of undetermined origin These include granuloma annulare scleroderma lichen sclerosus et atrophicus, psoriasis pityriasis rubra pilaris, lupus erythematosus, pemphigus vulgaris pseudoxanthoma elasticum and many other conditions

vitamin deficiencies and occur in radial arrangement at mucocutaneous orifices (e.g. commissures of lips)

Scars represent healing of a wound or ulcer by fibrous tissue. Atrophic scars, observed in discoid lupus erythematous and other conditions develop without preceding ulceration.

Depigmentation or *hyperpigmentation* may develop following an inflammatory reaction.

Ulcers are localized circumscribed disruptions in the continuity of the skin extending below the basal layer. Ulcers heal with scar formation.

An erosion is a superficial denudation of the skin.

Configurations. Configurations of lesions are frequently of great importance in establishing a morphologic diagnosis.

Annular lesions are ringed lesions in which the periphery and central portion differ in appearance. There are 14 relatively common dermatoses in which annular lesions may appear.

Umbilicated lesions are those which have a central depression. They are commonly seen in molluscum contagiosum, lichen planus, and varicella.

Serpiginous lesions have undulating margins. The arciform border is formed of several lesions which have become confluent. This phenomenon is observed in psoriasis, nodular serpiginous syphilid and other conditions.

A discrete lesion is one which is isolated. They may be small, large, single or multiple.

A confluent lesion is composed of several smaller lesions which have coalesced.

An iris lesion composed of multiple concentric rings, is commonly seen in erythema multiforme. It is also called a "target lesion."

Linear grouping of lesions is characteristic of dermatitis venenata, nevus unius lateralis, lichen planus, lichen striatus, and verruca plana juvenilis. This phenomenon may also be observed in psoriasis.

Characteristic groups of vesicles occur in herpes simplex, herpes zoster, dermatitis herpetiformis, and dermatitis venenata.

A pedunculated lesion is one in which the base is smaller than the body of the lesion.

A sessile lesion slopes into the normal skin and has a broad base.

A nummular lesion is flat-topped, circinate, and elevated (coin shaped).

LABORATORY AIDS IN DIAGNOSIS

Biopsy

The histopathologic picture of many dermatoses is not specific and it is important that the clinician recognize the limitation of biopsy as an aid in diagnosis. Great care and judgment should be exercised in the selection of the lesion to be examined. Biopsy is an essential diagnostic procedure in many patients with acute or chronic dermatoses, pigmented nevi removed surgically and in *all lesions in which a malignant change is suspected*. The biopsy specimen should be studied by someone who is experienced in interpreting *dermal* histopathology.

Several methods may be used for the removal of a skin specimen for study.

1. A simple method of excision has been described by Dr. F. A. Ellis (Fig. ?). Procaine solution (1.0 per cent) is injected around and under the area to be excised. The *specimen is* transfixed by the hypodermic needle used in infiltrating the skin with procaine. The *section* of tissue is removed to the depth of the subcutaneous tissue (at least 2 to 3 mm.) by making an incision on either side of the transfixing needle. The biopsy wound is closed with sufficient sutures to insure a good cosmetic result.

2. Dermal biopsy punches vary in size from 2 to 8 mm. in diameter. The area to be biopsied is infiltrated with procaine solution (1.0 per cent); the biopsy punch is pressed into the lesion by a circular motion to the depth of the subcutaneous tissue; the specimen is grasped by forceps, and freed with scissors. Although this is a rapid method of obtaining tissue the elliptical excision described in the preceding paragraph is preferred by the authors.

3. A rotary biopsy punch using a hand motor tool may be used for the removal of tissue specimens but is primarily of value in research.

In performing a biopsy, care should be taken to avoid squeezing the tissue with forceps. Any

of illumination A daylight electric bulb is satisfactory but light produced by the ordinary incandescent bulb or fluorescent tube distorts color and may alter the appearance of objective symptoms

The practitioner should record the distribution and arrangement of the lesions, and the gross characteristics of the eruption

Objective Cutaneous Lesions

Primary and secondary objective symptoms or signs are apparent to the practitioner A thorough knowledge of these objective lesions (Fig 6) is necessary to arrive at a morphologic diagnosis Objective symptoms are divided into primary and secondary lesions.

Primary lesions

A *macule* is a lesion of the skin which is neither raised nor depressed

A papule is a solid elevation in the skin

A vesicle is an elevation of the skin filled with serum.

A *pustule* is an elevation of the skin filled with pus

Combinations of primary lesions may exist i e *maculopapule papulovesicle vesicopustule*

Secondary lesions

Scales are fragments of the stratum corneum They may be profuse and silvery white as in psoriasis, scant and adherent as in lichen planus, or oily and yellowish as in seborrheic dermatitis.

Crusts are coagulation products of blood, serum, pus, or combinations of these. The appearance of the crust may be complicated by local medications.

Excoriations are scratch marks. These are factitious linear disruptions in the continuity of the skin The presence of excoriations indicates the subjective symptom of itching

Fissures are cracks in the skin secondary to loss of tone associated with inflammatory processes. Fissures are commonly observed in eczematous processes such as atopic dermatitis Rhagades are fissures seen in congenital syphilis and

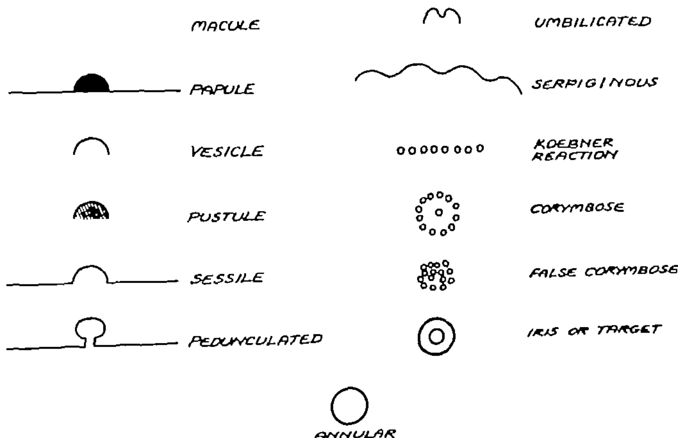
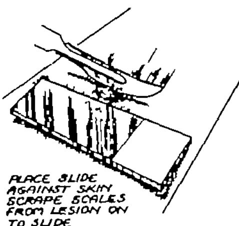


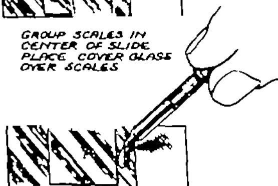
FIG 6 Configuration of lesions











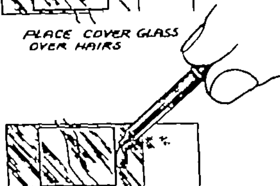




Fig 8 Technique for preparation f specimen for direct microscopic examination for fungi

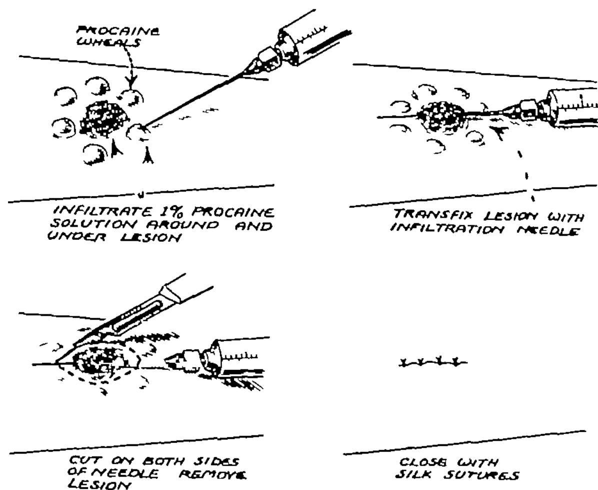


Fig   Biopsy technique

such manipulation may destroy or alter the histopathologic picture After the specimen has been obtained it should be dipped in normal saline solution to remove the excess of blood on the surface It should then be placed in a clean bottle containing 5 0 per cent formalin solution An adequate clinical description should accompany the biopsy specimen to the laboratory

Studies for Fungi

Identification of common dermatophytes may be made with a minimum of laboratory equipment Direct examination of scales, hair vesicles or nail scrapings may be performed with the use of a 20 per cent solution of potassium hydroxide or the ink potassium hydroxide stain a slide and cover slip and a microscope Sabouraud's culture media ready for use may be obtained from a hospital or health department laboratory

Direct examination (Fig 8) Hair scales, vesicles, or nail scrapings are placed in the center of a glass slide and are covered with a coverslip A drop of 20 0 per cent potassium hydroxide solution is placed at the margin of the coverslip and allowed to contact the specimen by capillary attraction The ink-potassium hydroxide stain is made by mixing 20 cc of 20 0 per cent solution of potassium hydroxide and 10 cc of Parker 51 Superchrome blue-black ink. The ink potassium hydroxide preparation has the advantage of imparting a blue color to the hyphae The moistened specimen is allowed to macerate for a variable time depending on the density of the material to be examined Scales should macerate for 10 to 15 minutes vesicle tops for 1 to 2 hours hair for 15 to 20 minutes, and nail scrapings from 12 to 24 hours The maceration time may be reduced by gently warming the wet preparation The slide preparation is placed between two pieces of blotting paper and gently pressed to

capitis. Infected hairs exhibit brilliant green fluorescence.

Not all fungus infections of the scalp show fluorescence. This is particularly true of trichophyton infections of the hair.

This modality produces golden yellow to dark brown fluorescence in the lesions of tinea versicolor. Many other organic and inorganic substances also fluoresce when exposed to the Wood light.

The Wood light is also of value in the diagnosis of pediculosis capitis. The ova glow with a grayish fluorescence.

Skin Tests

Patch tests, scratch tests, and intradermal tests are frequently employed to determine the etiology of allergic dermatoses.

Patch tests. The patch test is the method used to determine skin sensitivity to contact allergens such as poison ivy, medicaments, resins, and cosmetics.

The suspected allergen is placed on a piece of gauze 1 cm. square, moistened with water, and applied to an area of skin on which the hair growth is not excessive. The flexor surfaces of the forearms, the lower back, or the sides of the thighs are preferable testing sites. The piece of gauze containing the suspected sensitizing substance may be covered with cellophane and sealed with adhesive tape or with elastopatch. Readings should be made in 24 to 48 hours. A positive test may be classified as one plus (erythema), two plus (erythema and edema), three plus (vesiculation and erythema), or four plus (necrosis).

The examiner must be sure that he is not using a primary irritant in the performance of this test. Volatile substances, such as gasoline, soap, acids and alkalis, may be classified as primary irritants. These substances will produce a reaction in the skin of any individual. A positive reaction to a primary irritant is not an index of hypersensitivity.

Scratch tests. These are used to determine possible allergic reactions to inhalants, ingested or injected substances. They are of doubtful value. The tests are usually performed on the lower back, forearms, or the sides of the thighs. Using a pointed scalpel, a scratch ¼ to ½-inch long is made for each of the substances to be tested. A drop of 0.1 normal sodium or potassium hydroxide solution is placed over each scratch. A drop of the substance to be tested is placed into the drop of the potassium hydroxide solution and gently mixed with a clean applicator stick or toothpick. After 15 minutes the skin in the tested area is rinsed with sterile water and dried. A control scratch in which only the sodium or potassium hydroxide solution is used must be done with each series of tests. Readings are made in one, two and four hours. A positive reaction consists of a wheal 1.5 to cm. in diameter.

Intracutaneous tests. These are performed by injecting 0.1 cc. of the test material intradermally into the skin of the forearm or the upper back, using a tuberculin syringe or a small hypodermic syringe. The test substance must be injected superficially so that a wheal is produced. The readings are made at variable intervals depending on the type of material used in the test.

The *Frei test* is an intradermal test for lymphogranuloma venereum. A positive test indicates that the patient has or has had the infection but it does not mean that the presenting lesions are evidence of active disease. Commercial chick embryo antigen containing killed L. G. V. virus is most frequently employed in this test.

The *Ito test*, used in the diagnosis of chancroid, is performed by injecting 0.1 cc. of Ducrey vaccine intradermally. It is of doubtful value.

Skin tests for fungi given intradermally for common dermatophytes are unsatisfactory. Positive reactions to trichophyton or oidiomycin are of no significance.

The passive transfer test was designed to demonstrate the existence of specific antibodies by the local transfer of hypersensitivity. The test is performed by making an intracutaneous injection of a dilution of serum from an allergic patient on the back of a normal test subject. After an interval of 24 hours the antigen is injected intracutaneously at the same site and

express the excess potassium hydroxide or stain and spread the specimen Reduced light is used for the microscopic examination

Culture methods A culture on Sabouraud s medium should be made from all cases of suspected mycotic infection regardless of the direct examination result Sabouraud s medium may be purchased from general laboratories or obtained from health department laboratories. The physician may prepare his own medium by using the



Fig 9 *Malassezia furfur* (ink potassium hydroxide preparation)

commercially available product or it may be prepared according to the following formula

Glucose	40 0 gm
Agar	35.0 gm
Neopeptone	10.0 gm
Distilled water	1000.0 cc

Dissolve the glucose agar and *neopeptone* in distilled water with gentle heat filter through cotton gauze place in tubes autoclave at 15 lb pressure for 15 minutes and slant The most satisfactory tubes are those which have screw caps After the slants have cooled they should be stored in a refrigerator

The Wood light consists of ultraviolet rays with a peak wave length at 3650 Ångstroms filtered through nickel oxide glass. Purple X electric bulbs also transmit ultraviolet rays in the region of 3650 Ångstroms. This is a photoflood lamp covered with a layer of cobalt and is inexpensive These lamps become hot and occasionally explode therefore they must be handled with caution

The Wood light is one of the most practical methods used in the diagnosis and management of tinea capitis caused by *Microsporum audouini* and *Microsporum canis* It is valuable for screening school children for the presence of tinea



Fig 10 Spores and hyphae i hair from case f tinea capit (potassium hyd ide preparati n)

Chapter 5

DERMAL HISTOPATHOLOGY

The history and clinical findings are important aides in the interpretation of many skin biopsies. The microscopic findings of some dermatoses are pathognomonic; however, many dermatologic entities do not have diagnostic histopathologic pictures and, in such situations, the biopsy may only confirm or disprove the clinical impression.

The examiner should follow a routine in studying sections of skin so that some diagnostic point may not be overlooked. The section should first be examined using the reverse ocular technique. The general structure of the epidermis, relative thickness of the keratin layer, presence of acanthosis, gross architecture of the epidermis and the pattern of the dermatosis may be visualized in this manner. The section is then studied under the microscope using the low power. The keratin layer should be studied to determine whether it is thickened or decreased. The presence of parakeratosis, plugging, Munro abscesses, or other changes which may be present should be noted. The examiner should observe the thickness of the stratum lucidum where present and the presence of an increase or decrease in the thickness of the granular layer. He should carefully study the rete (prickle cell layer) for the presence of edema (intracellular or extracellular), balloon degeneration, acanthosis, infiltration, mitosis, dyskeratotic cells, absence of prickles, and other possible alterations. The cells in the basal layer of the epidermis should be examined for mitosis, pigmentation, acantholysis, exocytosis, and other pathologic changes. After the study of the epidermis has been completed, the examiner should proceed to note changes in the papillary layer of the dermis such as liquefaction at the junction of the basal layer and the papillary portion of the dermis. Changes in the midportion of the dermis, the deeper layers of the dermis and, finally, those in the subcutaneous tissue or fatty layer should be noted. The type of cellular infiltrate (perifollicular or perivascular) should be recorded. The hematoxylin-eosin stain is usually satisfactory for demonstration of changes in collagen or elastic tissue but occasionally special stains must be used. Sebaceous glands, sweat glands, and hair follicles should be studied for pathologic changes.

Glossary of the More Common Dermal Pathology Terms

Acantholysis is a loss of coherence and polarity of epidermal cells due to degeneration of the intercellular bridges. Acantholysis may be due to a lack of resistance in the prickle cells in a circumscribed area and fluid collects between the cells. The acantholytic cell (dying cell) becomes enlarged and spherical. The peripheral cytoplasm becomes basophilic and forms a halo about the enlarged, deeply stained nucleus.

Acanthosis denotes an increase in the thickness of the prickle cell layer of the epidermis. This may be caused by an increase in the number of the individual rete cells or to an increase in the size of the cell.

Atrophy is an acquired decrease in size of a portion of the body, of an organ, of individual tissue, or of individual cells. It is manifested by repression, or partial to complete disappearance of structural elements. It is caused by gradual loss in volume, actual destruction, or transformation into degenerative products. Atrophy is usually evidenced in the epidermis by flattening at the dermal junction and loss of rete pegs.

Basophilic degeneration refers to the blue staining of the connective tissue when hematoxylin-eosin stain is used. It is found in such conditions as lupus erythematosus, senile skin and actinic dermatitis.

also in an adjacent area as a control. The area sensitized by the serum from the allergic patient will give an immediate positive reaction whereas the normal control should show no reaction. *This test is thought by some allergists to be of* value in patients with generalized atopic dermatitis or urticaria.

Dark Field Examination

Identification of *Spirochaeta pallida (Treponema pallidum)* under the dark field microscope by a competent observer is the only positive means of establishing a diagnosis of syphilis. This method is of value only in early syphilis. The specimen may be obtained from any moist lesion (chancre, condylomata lata or mucous patches). Serum is obtained for dark field examination from a dry papule by *excoriating the surface until it bleeds* then compressing with dry gauze until the bleeding is stopped and serum exudes. A drop of clear serum is placed on a cover slip, inverted on a clean slide, pressed and the specimen is examined under the dark field microscope. Gland puncture may also be productive of a positive dark field examination in patients with early syphilis.

Serologic tests for syphilis. These tests will be discussed in the chapter on Venereal Diseases.

Routine Blood Studies

Blood chemistries, hemograms, sedimentation rate and *electrophoretic patterns should be done* whenever indicated. In view of the fact that most of these tests are expensive they should not be performed on every patient who visits the office or the clinic. These tests are usually not necessary in scabies, pediculosis, pityriasis rosea, psoriasis, alopecia areata, verruca vulgaris, epidermophytosis and impetigo contagiosa. In conditions *such as cutaneous xanthomata*, eosinophilic granuloma, gout, *erythema multiforme*, erythema nodosum, tuberculosis, lupus erythematosus and blastomycosis special studies are definitely indicated.

Roentgen Studies

Because of the expense it is usually not necessary to perform these studies on patients who have benign conditions such as impetigo contagiosa, epidermophytosis, alopecia areata and lichen planus. It is necessary to have routine x-ray studies of the chest and *skeletal structures in xanthomatosis*, sarcoidosis, tuberculosis, blastomycosis, eosinophilic granuloma, and other systemic diseases manifested by skin lesions.

Diascopy

A diascope is a thick glass slide which is pressed against the skin for the purpose of observing changes other than an inflammatory reaction. Its primary value lies in the clinical study of lupus vulgaris where the yellowish brown color of the nodule is made visible by the use of this test.

Bacterial Studies

Bacterial studies should be performed on resistant pyogenic infections. Initial cultures may be made on blood agar. The identification of the causative organism should be made by a competent *bacteriologist*. *Disc diffusion or tube* dilution sensitivity tests should be performed to determine the antibiotic of choice for the systemic treatment of resistant pyogenic infections.

Chapter 6

MYCOLOGY

Fungi are plants which have no roots, leaves or stems. They do not contain chlorophyll and require living or dead organic matter for food. Fungi may be yeast-like or form septate threads called *hyphae*. Hyphae are usually branched and form a meshwork of filaments called *mycelium*. Fungi are subdivided into those which produce sexual spores (*Phycomycetes*, *Basidiomycetes* and *Ascomycetes*) and the *Fungi imperfecti* which have only asexual spores. All pathogenic fungi and the common laboratory contaminants are *Fungi imperfecti* (Fig. 11).

Fungi imperfecti are classified according to the types of asexual spores produced.

Thallospores are reproductive spores formed by the mycelium. *Blastospores* are spores formed by budding from the mycelium cells. *Chlamydospores* are round, thick walled spores formed from the terminal cells of pseudohyphae of the *Candida* species. *Arthrospores* are formed by segmentation of hyphae.

Conidia are produced on specialized hyphae called conidiophores and freed by constriction at the point of attachment. Single-celled, small conidia are *microconidia* and large multicellular spores are *macroconidia*. Shapes and sizes of the conidia help identify the species. There may be specialized forms of conidia such as *sporangiospores*.

MYCOLOGIC DIAGNOSTIC METHODS

Direct microscopic examination. The specimen (scales, vesicle tops, hairs, nail shavings, or pus smear) is placed in the center of a glass slide, two drops of 20 per cent potassium hydroxide are added and a cover slip is placed over the specimen. The ink-potassium hydroxide stain may be used instead of 20 per cent potassium hydroxide to emphasize microscopic features. Specimens treated with potassium hydroxide solution may be warmed gently to hasten clearing. Ink-stained specimens should be examined without warming. Positive direct examinations reveal hyphae and spores, budding yeasts or sulfur granules, depending upon the organism present.

Potassium hydroxide-treated nail specimen should be kept in a moist chamber overnight to dissolve the keratin. Hair requires 15 to 20 minutes to clear, vesicle tops may require 1 or 2 hours, and scale may be examined immediately. Spinal fluid should be centrifuged and the sediment examined.

Stain. Hematoxylin-eosin stain is generally satisfactory for fungi in tissue. The Gram stain and the periodic acid-Schiff stain are occasionally necessary. A drop of India ink may be used as a capsule stain if *Cryptococcus* is suspected in spinal fluid.

Culture methods. All material from suspected fungus diseases should be cultured on Sabouraud dextrose agar or mycosel agar medium. Mycosel agar containing actidione and chloromycetin is not as readily contaminated as Sabouraud's medium. Specimens are incubated at room temperature. *Actinomyces bovis* may be cultured in thioglycollate broth or brain-heart-infusion glucose blood agar. The tissue phase of some of the deep fungus diseases may be demonstrated by growth on the latter medium in an incubator at 37°C. Corn meal agar is used to stimulate the formation of the characteristic chlamydospores of *Candida*. One per cent dextrose is added to corn meal agar medium to differentiate *Trichophyton rubrum* (formation of red-purple color) from *Trichophyton mentagrophytes*. *Microsporum audouini* does not grow on rice medium but *Microsporum canis* does.

Cellules claires are found in and about the basal layer of the epidermis. They are thought to be related to melanocytes dendritic cells or the tactile cells of Merkel Ranvier

Chromatophores are large cells which ingest and carry pigment They are found in the dermis.

Collagen is the normal fibrillar connective tissue found in the corium

Collacin and *collastin* are degenerated collagen

Corps ronds and *grains* are dyskeratotic cells occurring in the prickle cell layer These are characteristically found in keratosis follicularis

Dyskeratosis signifies a defect in keratin formation Dyskeratotic cells are those which undergo abnormal premature keratin formation

Epithelial giant cell is an abnormal or large multinucleated epithelial cell

Epithelioid cells are derived from the reticulo-endothelial system and resemble epithelial and endothelial cells

Exocytosis designates the appearance of inflammatory cells in the epidermis

Foreign body giant cells are multinucleated macrophages in which the nuclei are grouped in the center of the cell

Granuloma is a broad term which covers subacute or chronic inflammatory processes that are more or less circumscribed *It excludes both the acute exudative process and tumors. It is observed in syphilis, tuberculosis, leprosy and the deep* mycoses

Histiocytes are connective tissue cells of the reticuloendothelial system and have phagocytic properties

Hyperkeratosis means an increase in thickness of the stratum corneum.

Hyalin degeneration means that the connective tissue has become homogeneous and is stained more intensely than normal by the eosin part of the hematoxylin-eosin stain

Hyperplasia indicates an increase in size caused by an increase in cellular elements

Hypertrophy indicates an increase in size of individual cells which subsequently produce enlargement of the involved part

Karyorrhexis describes nuclear dissolution

Lacunae are small slit like, *intra-epidermal* vesicles, usually lined by a layer of basal cells. They often contain desquamated acantholytic epidermal cells which *have lost their* prickles because of degenerative changes or partial keratinization

Langhans cells are multinucleated giant cells seen in tuberculosis and other *granulomas*. The nuclei are arranged in an arciform *manner at the* periphery of the cells.

Liquefaction degeneration describes the type of dissolution of the basal cell layer observed in lichen planus, lupus erythematosus, and some other conditions

Macrophages are histiocytes which have phagocytized particulate matter or microorganisms.

Molluscum bodies are large cell inclusions which contain the virus of molluscum contagiosum.

Munro's abscess is a microscopic collection of leukocytes found in the stratum corneum at the granular layer These occur in psoriasis.

Necrobiosis is a peculiar type of connective tissue degeneration observed in necrobiosis lipoidica diabeticorum and granuloma annulare. The tissue retains its form but not its staining quality

Parakeratosis indicates retention of nuclei in the cells of the stratum corneum This is observed *in* scaling dermatoses.

Pautrier's abscess is a microscopic lesion in the *epidermis seen in mycosis fungoides. It is composed of the same type of cells which form the in* filtrate in the corium

Pseudoepitheliomatous hyperplasia is a benign increase in epidermal elements observed in chronic inflammatory dermatoses and may resemble prickle cell carcinoma

Pyknosis means shrinking of the nucleus of the cell

Senile degeneration refers to changes in the elastic tissue observed in the skin of the elderly The affected fibers are basophilic

Spongiosis indicates intercellular edema of the epidermis.

Touton giant cells are xanthoma cells in which multiple nuclei *are grouped around small islands* of nonfoamy cytoplasm

Tubercles are characteristic groups of cells found in tuberculosis and sarcoidosis.

Xanthoma cells are histiocytes which have one or more nuclei These cells contain phagocytized lipoid material

for serologic and intradermal testing are prepared from cultures of *Blastomyces dermatitidis*, *Blastomyces brasiliensis*, *Histoplasma capsulatum*, *Coccidioides immitis*, *Sporotrichum schenckii*, *Candida albicans*, and *Cryptococcus neoformans*.

Dermatomycoses

Dermatomycoses are fungus infections of the superficial layers of the epidermis.

Tinea pedis (epidermophytosis, athlete's foot). This is a fungus infection of the feet affecting the interdigital spaces and soles. It is usually caused by *Trichophyton rubrum*, *Trichophyton mentagrophytes*, or *Epidermophyton floccosum*. The condition may be acute, subacute, or chronic. The acute stage is vesicular and edematous. Secondary pyogenic infection may cause systemic symptoms. The subacute stage is primarily vesicular. The chronic stage produces fissures and maceration between the toes. Dry hyperkeratotic scaling areas may be present on the soles and sides of the feet. The third and fourth interdigital spaces are commonly involved.

Differential diagnosis. This condition must be differentiated from atopic dermatitis, contact dermatitis, pustular psoriasis, dyshidrosis and hyperhidrosis. Direct microscopic examination and cultures may help confirm the diagnosis.

Onychomycosis. Fungus infections of the nails are commonly caused by *Trichophyton rubrum*, *Trichophyton mentagrophytes*, and *Candida albicans*. The nails become thickened, brittle, distorted, and discolored. Heavy subungual concretion is usually present.

Differential diagnosis. This condition must be differentiated from psoriasis, onycholysis, pachyonychia congenita, dystrophy following trauma, eczema, and exfoliative dermatitis. Scrapings and cultures are essential for accurate diagnosis.

Tinea cruris. Tinea cruris is a fungus infection of the crural, genital and perianal areas caused by *Candida albicans*, *Epidermophyton floccosum*, or one of the *Trichophytons*. The lesions are usually well defined, with elevated borders surrounding the reddish, scaling areas of dermatitis. The eruption spreads peripherally and occasionally vesicles may be observed in the margins. The eruption is usually bilateral.



Fig. 11. Culture mount showing racquet hyphae.

Differential diagnosis. Differentiate from neurodermatitis, contact dermatitis, psoriasis, and seborrheic dermatitis. Scraping and cultures help to establish the diagnosis.

Tinea corporis. Tinea corporis is caused by fungi of the *Microsporum* and *Trichophyton* groups. The lesions may be superficial or granulomatous. The classical lesion is an annular macule with an elevated, erythematous margin and central scaling. Vesicles and pustules may be present. Lesions may be single or multiple. Animals are frequently vectors of this common infection in children.

Differential diagnosis. Differentiate from psoriasis, pityriasis rosea, granuloma annulare, neurodermatitis, secondary syphilis, annular lichen planus, seborrheic dermatitis, contact dermatitis, drug eruption, and erythema annulare centrifugum. Laboratory demonstration of the fungus is diagnostic.

Tinea imbricata. This rare tropical disease is caused by *Trichophyton concentricum*. The disease consists of concentric scaling rings over the entire body. It is resistant to treatment.

Tinea barbae (barber's itch). This is a chronic fungus infection of the bearded area caused by *Microsporum* or *Trichophyton* organism. The superficial type resembles tinea corporis. A deeper infection is characterized by the formation of follicular pustules with kerion-like abscesses

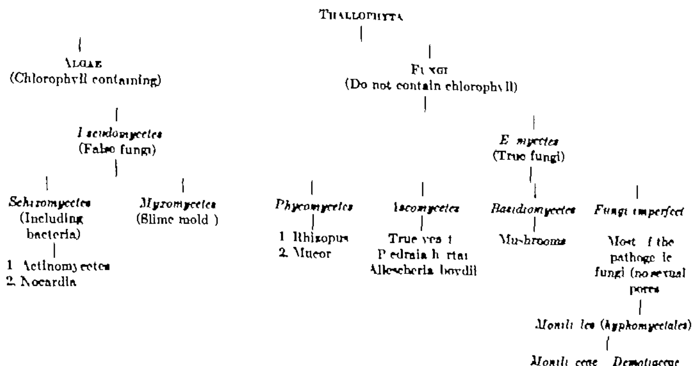


Fig. 11 Bi logical cla ification of fungi All pathogenic fungi except the *Actinomycetes* and the two species of *Ascomycetes* belo g to the *Fungi imperfecti* having no known sexual reproduct on.



Fig 12 *M c osporum cani* grown Sabouraud medium.

Cultures are examined for gross and microscopic characteristics (Figs. 12 13 14)

Animal inoculation Intravenous, intraperi toneal and intracerebral inoculations of labora tory animals determine pathogenicity and enable the study of the tissue phase of disease producing fungi

Filtered ultraviolet (Wood light) Ultra violet filtered through cobalt nickle glass is used in a darkened room a a diagnostic aid in tinea capitis, tinea versicolor and erythrasma Hairs infected by *Microsporum canis* or *Microsporum audouini* fluoresce with a bright green color not produced in hair infected by other fungi Erythrasma lesions fluoresce with a red color Areas of tinea versicolor produce a dull brown fluorescence

Immunologic tests for fungi Antigens



Fig 13 Culture mount f nonpathogenic contaminant



Fig. 15 (*top*) *A and B* Moniliasis
Fig. 16 (*bottom left*) Monilial granulomas
Fig. 17 (*bottom right*) Crural involvement in an adult

membranes of infants or in the vaginal tracts of children and women. This organism is also one of the causes of perlèche (fissured lesions at the oral commissures)

Cutaneous candidiasis. Paronychia is a painful swelling of the periungual tissues. Onychia is characterized by thickening, discoloration, distortion, and crumbling of the nail plates. Intertriginous lesions are well-defined, vesicopustular erythematous moist areas. Monilial lesions involving the toes resemble epidermophytosis caused by the Trichophytons. Moist erosive lesions of the interdigital spaces of the fingers are called erosio interdigitalis blastomycetica (Figs. 15 16 17)

Generalized candidiasis Extensive lesions may develop in the gastrointestinal tract, lungs liver spleen, endocardium, and the meninges. Arthritis has been reported and pneumonic consolidation caused by monilial infection may occur

Mycology of the Dermatophytes

Gypseum group Gross cultural characteristics reveal cotton-like colonies which are white or tan, granular or powdery Microscopic examina

and bogginess Wood light examination is of diagnostic value if *Microsporum canis* or *Microsporum audouini* is the causative organism

Differential diagnosis Differentiate from contact dermatitis alopecia areata seborrheic dermatitis sycosis vulgaris, pustular syphilis halogen dermatitis and cystic acne Laboratory procedures are diagnostic

Tinea capitis This is a fungus infection of the scalp caused by species of *Trichophyton* and *Microsporum* In children the disease is caused most commonly by the *Microsporum* group The hairs become brittle and break off or fall out producing circumscribed areas of partial alopecia covered with adherent dry scales Infections with *Microsporum canis* and *Microsporum gypseum* may produce edematous inflammatory lesions called *kerion* and *Microsporum audouini* usually causes dry scaling lesions Hairs infected with *M audouini* or *M canis* have a brilliant green fluorescence when examined under filtered ultraviolet (Wood light) in a darkened room Hairs infected with *M gypseum* do not fluoresce *M canis* and *M gypseum* are transmitted to man by animals. *M audouini* is transmitted only by human contact

Tinea capitis caused by *Trichophyton tonsurans* or *Trichophyton violaceum* occurs in children and adults The lesions are scaling macules with alopecia, the broken-off hairs being responsible for the name *black dot disease* which is usually applied to this type of scalp ringworm. These infected hairs do not fluoresce

Tinea favosa (favus) This is a chronic type of tinea capitis caused by *Trichophyton schönleini* (occasionally by *Trichophyton violaceum* or *Microsporum gypseum*) It usually produces scutula which have a musty odor Scarring and permanent alopecia are common sequelae This disease is endemic in Slavic and southern European countries, *but rarely occurs in native-born Americans.* Virginia and Kentucky are the only endemic foci in the United States.

Differential diagnosis Differentiate from discoid lupus erythematosus pseudopelade psoriasis, impetigo folliculitis decalvans, trichotillomania and secondary syphilis. Laboratory procedures are essential for accurate diagnosis.

Tinea versicolor This is a superficial chronic fungus infection which appears as fawn-colored, scaly macules on the trunk Occasionally lesions develop in the groins, axillae arms, thighs, neck face and scalp The lesions produce a dull brown fluorescence under the Wood light. The areas may be hypopigmented Direct microscopic examination of the scales reveals grapelike bunches of spores and short branching hyphae A satisfactory means of culture has not been developed for *Malassezia furfur* the causative organism

Erythrasma Erythrasma is a chronic fungus infection involving the stratum corneum of the axillae or crural region The lesions appear as serpiginous erythematous maculopapules with a scant amount of greasy scale *Nocardia minutissimum* the causative organism may be demonstrated on direct microscopic examination A satisfactory means of culture has not been developed for this organism

Piedra This is a fungus infection of hair characterized by the formation of hard nodules or concretions on the shafts of the scalp hair and mustache Black piedra is caused by *Piedra hortai* and white piedra is caused by *Trichosporon beigelii* Both are rare in the United States

Trichomycosis axillaris or Lepothrix This is a condition in which the axillary and pubic hairs are covered with yellow red or black concretions. It is probably caused by a *Corynebacterium* and not by a fungus.

Candidiasis (moniliasis) an infection caused by *Candida albicans* may involve the mouth vagina skin and nails or produce extensive pulmonary and gastrointestinal lesions *Blood* stream invasion may produce meningeal or endocardial lesions. The organism is found on the skin and mucous membranes in 1% per cent of normal people Broad spectrum antibiotics are thought to stimulate development of candidiasis by altering the normal bacterial flora of the skin and gastrointestinal tract.

Mucous membranes White plaque-like lesions of moniliasis (thrush) appear on the oral mucous

ease is accompanied by fever chills sweats and other symptoms referable to the affected organs.

Mycology Microscopic examination of the crushed sulfur granules reveals the club shaped hyphae which create the appearance of the ray fungus The organism is Gram-positive Material must be cultured on brain-heart infusion glucose broth or Brewer's thioglycollate broth and incubated anaerobically *Actinomyces bovis* appears as cottony white small suspended colonies in the medium. Immunologic tests have not been developed for this infection.

Nocardiosis. This is caused by *Nocardia asteroides* and other species of the same genus. *Nocardia asteroides*, an aerobic organism, is partially acid fast and produces lesions similar to those caused by *Actinomyces bovis* It may in ol bone lungs, or central nervous system as well as skin and subcutaneous tissues

North American blastomycosis (Gilchrist's disease) This is caused by the *Blastomyces dermatitidis* a single-budding yeast with a doubly contoured cell wall. The typical cells are found in infected tissue and incubated cultures. The filamentous cottony fungus grows on artificial media at room temperature The disease is characterized by the development of granulomatous and suppurative lesions in the skin The respiratory tract is the usual portal of entry and subsequently the liver spleen, kidney and central nervous system may become involved The organism can be found in pus and tissue on direct examination The diagnosis is verified by culture A complement fixation test and an intradermal test are valuable as diagnostic and prognostic aids. The patient with a positive complement fixation test in high titre and a negative or weakly positive intradermal test has poor prognosis.

South American blastomycosis (paracoccidioidal granuloma) This is caused by *Blastomyces brasiliensis* It is a multiple budding large yeast in tissue or when cultured in an incubator It develops a low-growing, heaped, wrinkled colony when incubated at room temperature Cutaneous and mucosal lesions lymphangitis and visceral lesions, or mixed involvement may constitute the clinical picture It is seen chiefly in Brazil The intradermal skin test and complement fixation test are useful diagnostic aids.

Coccidioidomycosis Coccidioidomycosis is caused by *Coccidioides immitis*. It is found chiefly in the San Joaquin Valley of California. The organism is present in the soil. Two main clinical types are seen.

Primary pulmonary coccidioidomycosis may be asymptomatic or appear as a mild upper respiratory infection. Erythema nodosum and erythema multiforme may occur simultaneously Mediastinal adenopathy is part of the syndrome of pulmonary involvement Progressive pulmonary coccidioidomycosis, a fatal manifestation, is a massive type of pneumonia common in dark skinned people Meningitis and osteomyelitis may occur

Nonpulmonary primary coccidioidomycosis occurs as granulomatous or verrucous skin lesions on exposed area

Mycology The organism is a non-budding, thick walled spherule filled with endospores On culture media the organism produces white cottony mycelium with septate hyphae which become chains of arthrospores Intradermal and complement fixation tests are useful diagnostic aids.

Histoplasmosis This is a fungus infection which begins in the upper respiratory tract and is caused by *Histoplasma capsulatum* The condition may start as primary pulmonary histoplasmosis and become a progressive systemic disease with anemia, fever leukopenia, splenomegaly and hepatomegaly Generalized lymphadenopathy intestinal ulceration nasal ulceration, and granulomatous lesions may develop as part of the systemic syndrome The organism is present in the soil. Complement fixation tests, intradermal test and standard cultures and biopsies are necessary to establish the diagnosis The organism is intracellular and is present in the reticulo-endothelial cells of all affected tissues.

Mycology The organism grows on artificial media in the incubator as a creamy yeast and as a white filamentous colony at room temperature. Microscopically it presents budding, oval cells in the yeast phase In the filamentous phase

tion of cultures reveal spiral or coiled hyphae nodular bodies and chlamydospores. *Trichophyton mentagrophytes* shows all the characteristic features of this group

Rubrum group The colonies are cotton like or powdery with a red purple color developed on the under side of the medium. Inoculation of the organism on corn meal dextrose agar aids in developing the purple-red color

Crateriform group *Trichophyton tonsurans* is a cause of nonfluorescent tinea capitis Gross cultural characteristics show a white cream yellow or brown heaped folded surface Colonies are velvety or powdery Microscopically clavate microconidia are seen along the hyphae Chlamydospores and club-shaped terminal hyphae are also present This is an endothrix organism

Faviform group The colonies on Sabouraud's medium are waxy glabrous, heaped and folded and grow slowly Later velvety or powdery mycelium may appear Hyphal swellings chlamydospores, and favic chandeliers are seen microscopically Five species are seen in this group

Trichophyton schoenleini Cross section reveals glabrous heaped cerebriform yellow brown colonies Favic chandeliers are seen microscopically

Trichophyton concentricum At first the colonies are white folded and heaped and turn brown later This organism causes tinea imbricata

Trichophyton ferrugineum The colonies are yellow or orange heaped folded and waxy The organism is an ectothrix

Trichophyton violaceum The colonies are glabrous, folded heaped and violet in color Microconidia and macroconidia are seen on microscopic examination when the fungus is grown on enriched medium

Trichophyton verrucosum The colonies are cerebriform waxy and white Chlamydospores are seen on microscopic examination

Rosaceum group Velvety white colonies later become rose to pink Microscopically many microconidia racquet hyphae and chlamydospores are seen

Trichophyton megnini This requires *l* histidine for growth on artificial media It has a cotton white and later rose- or violet-colored growth

Trichophyton gallinae The white downy colonies have radial grooves and red pigment throughout the agar It does not require *l*-histidine for growth on artificial media

Microsporum group

Microsporum audouini Colonies are slow growing gray to brown in color with radial grooves and a red brown color on the reverse side They grow poorly on rice medium Few macroconidia develop except on special media Clavate microconidia are rarely seen

Microsporum canis Rapidly growing cotton like colonies become powdery and brown with a yellow-orange color on the reverse side of the colony They grow well on rice medium. Microscopically multiseptate large spindle-shaped thick walled macroconidia are seen

Microsporum gypseum Fast growing powdery colonies develop a cinnamon brown color and a red-brown color is seen on the reverse side of the colony Septate ellipsoidal rough walled macroconidia are seen microscopically

Epidermophyton floccosum The olive-green colonies are velvety or powdery with radiating grooves Microscopically no microconidia are seen but there are abundant macroconidia which are large clavate multiseptate and thin walled Chlamydospores are also seen Because of rapidly developed pleomorphism the colonies turn white and cotton like

Candida albicans Direct microscopic examination reveals small oval budding thin walled yeast cells. Short hyphae may also be present Cultures show white to cream-colored moist colonies which have a yeast-like color Inoculation of corn meal agar is productive of the diagnostic lateral and terminal chlamydospores. This is the only *Candida* pathogenic to man

THE DEEP FUNGUS INFECTIONS

Actinomycosis This disease is caused by *Actinomyces bovis*, an anaerobic fungus This is a chronic infection with abscess formation and multiple draining muses Sulfur granules composed of clumps of granular Gram positive hyphae are found in the purulent discharge The disease is classified as the cervicofacial type and the thoraco-abdominal type This systemic dis-

ease is accompanied by fever chills, sweats and other symptoms referable to the affected organs.

Mycology Microscopic examination of the crushed sulfur granules reveal the club shaped hyphae which create the appearance of the "ray fungus" The organism is Gram-positive Material must be cultured on brain-heart infusion glucose broth or Brewer's thioglycollate broth and incubated anaerobically *Actinomyces bovis* appears as cottony white small suspended colonies in the medium. Immunologic tests have not been developed for this infection.

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Mycology The organism grows on artificial media in the incubator as a creamy yeast and as a white filamentous colony at room temperature Microscopically it presents budding, oval cells in the yeast phase In the filamentous phase

hyphae with tuberculate chlamydospores are diagnostic. These spores are thick walled round bodies, covered with many short flagellate structures projecting from the cell walls.

Cryptococcosis. Caused by *Cryptococcus neoformans* cryptococcosis usually involves the *meninges and brain but may affect the lungs* skin or other organs. It enters the body through the upper respiratory tract and reaches the meninges and brain by hematogenous spread. The symptoms are those of chronic meningitis such as headaches, vertigo and stiff neck. Psychotic symptoms may develop. Papular ulcerative and granulomatous lesions are seen on rare occasions.

Mycology. Examination of the spinal fluid discloses an increased cell count with budding and encapsulated yeast cells, made visible with India ink. Cultures are creamy and yeast like. The organism has the ability to grow at 37°C which differentiates the pathogenic *Cryptococcus neoformans* from nonpathogenic organisms of the same family.

Sporotrichosis. This is a chronic infection caused by *Sporotrichum schenckii*. The primary lesion is the sporotrichal chancre which develops at the site of inoculation. Nodules develop along the lymph vessels, and viscera may be involved. The organism is soil-borne. The disease is classified clinically into (1) lymphangitic type with chancre-like primary lesion and nodule formation along the lymph vessels (2) epidermal type, (3) a mucous membrane type with ulceration and (4) the visceral type.

Mycology. Sporotrichum schenckii is seldom identified in direct smears. Cultures grow in 3 to 5 days as small white moist wrinkled colonies *which may turn gray or black.* Microscopically thin septate hyphae with pyriform ovoid conidia are seen. Complement fixation and intradermal *tests are of doubtful value.*

Maduromycosis. This is a chronic infection of the feet caused by a variety of fungi of many *different species. This tropical disease is characterized* by swelling and multiple sinuses with a purulent discharge containing sulfur granules. Bone destruction occurs in advanced cases. The variety of causative organisms include *Allescheria boydii, Madurella, Indiella, Cephalosporium, Glenosporium, Phialophora, Monosporium, Actinomycetes, Nocardia, Aspergillus* and *Penicillium.*

Chromoblastomycosis is endemic in Central America, however an occasional case develops in the southern United States. It is caused by members of the *Hormodendrum* and *Phialophora* groups. The lesions develop primarily on the extremities as verrucous and papillomatous vegetations.

Mycology. The organism appears as brown septate bodies in tissue and in pus. On culture *media the organisms are brown to black* brittle colonies with short nap-like mycelium.

Chapter 7

ALLERGY

Allergy is an acquired specific alteration in living tissue reaction, upon exposure to organic or inorganic substances

Sensitivity is the normal tissue reaction to exposure

Hypersensitivity is a greater than normal capacity to react

Hyposensitivity is a less than normal capacity to react

Immunity is a state of resistance to a specific pathogenic agent

An allergic reaction postulates that (1) the allergen was encountered, in some form, by the patient at a previous time (2) the patient's response to the subsequent exposure was different from the response to the first exposure and (3) the alteration in the reactive capacity of the patient was the result of a previous exposure In allergic tests the *incubation period* the time lapse that exists between exposure to a given agent and the first appearance of a characteristic reaction by the sensitized tissue The reaction time is the period which exists from the moment of exposure of the sensitive tissue to the specific excitant to the appearance of the first gross tissue change

If the original allergen remains in contact with the reactive tissue after the incubation time has elapsed *spontaneous flare* may occur without reapplication of the substance The *spontaneous* flare will explain the appearance of an eruption 10 to 14 days after exposure to poison ivy or 2 to 3 weeks after an injection of penicillin. All exposures to allergens do not result in sensitization. This apparent immunity is called a *refractory period*

Some allergens give rise to specific reactions when used as test materials poison ivy produces a vesicular reaction in 24 to 48 hours aspirin, an urticarial type reaction in 15 to 30 minutes and the tubercle bacillus, a papular reaction in 24 to 48 hours. The reaction time is always the same regardless of the number of exposures. An accelerated response may be obtained because an incubation period is not necessary

Allergic reactions may be macular papular vesicular pustular or urticarial. The three major types of cutaneous allergic reactions are eczematous urticarial and tuberculin

Eczema

Eczema is a morphologic not a specific diagnostic term Eczema may be atopic seborrheic or contact In the acute phase the eruption is macular papular or vesicular dry or moist and has an erythematous edematous base It may be uniform or multiform, discrete or confluent, ill defined or partially defined Crusting may or may not be present As the eruption becomes chronic the skin becomes thickened and lichenified because of accentuation of the normal skin lines. The lesion may be dull red or hyperpigmented Secondary pyogenic infection may complicate the picture An area of chronic eczema may become acutely inflamed

Eczematous contact response Formerly the epidermis was thought to be the shock tissue but recent studies indicate that the reaction probably starts in the cutis Although circulating antibodies have not been found they may rest within certain white cells. There is no familial tendency and there is no eosinophilia The clinical reaction consists of edema, erythema and vesicle formation Histologically there is spongiosis

hyphae with tuberculate chlamydospores are diagnostic. These spores are thick walled round bodies, covered with many short flagellate structures projecting from the cell walls.

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Immunity is a state of resistance to a specific pathogenic agent.

An allergic reaction postulates that (1) the allergen was encountered, in some form, by the patient at a previous time; (2) the patient response to the subsequent exposure was different from the response to the first exposure; and (3) the alteration in the reactive capacity of the patient was the result of a previous exposure. In allergic states the *incubation period* is the time lapse that exists between exposure to a given agent and the first appearance of a characteristic reaction by the sensitized tissue. The *reaction time* is the period which exists from the moment of exposure of the sensitized tissue to the specific excitant to the appearance of the first gross tissue change.

If the original allergen remains in contact with the reactive tissue after the incubation time has elapsed, spontaneous *flare* may occur without reapplication of the substance. The spontaneous flare will explain the appearance of an eruption 10 to 14 days after exposure to poison ivy or 2 to 3 weeks after an injection of *penicillin*. All exposures to allergens do not result in sensitization. This apparent immunity is called a *refractory period*.

Some allergens give rise to specific reactions when used as test materials: poison ivy produces a vesicular reaction in 24 to 48 hours; aspirin, an urticarial type reaction in 15 to 30 minutes; and the tubercle bacillus, a papular reaction in 24 to 48 hours. The reaction time is always the same regardless of the number of exposures. An accelerated response may be obtained because an incubation period is not necessary.

Allergic reactions may be macular, papular, vesicular, pustular, or urticarial. The three major types of cutaneous allergic reactions are eczematous, urticarial, and tuberculin.

Eczema

Eczema is a morphologic, not a specific diagnostic term. Eczema may be atopic, seborrheic, or contact. In the acute phase the eruption is macular, papular, or vesicular, dry or moist, and has an erythematous, edematous base. It may be uniform or multiform, discrete or confluent, ill defined or partially defined. Crusting may or may not be present. As the eruption becomes chronic the skin becomes thickened and lichenified because of accentuation of the normal skin lines. The lesions may be dull red or hyperpigmented. Secondary pyogenic infection may complicate the picture. An area of chronic eczema may become acutely inflamed.

Eczematous contact response. Formerly the epidermis was thought to be the shock tissue, but recent studies indicate that the reaction probably starts in the cutis. Although circulating antibodies have not been found they may rest within certain white cells. There is no familial tendency and there is no eosinophilia. The clinical reaction consists of edema, erythema, and vesicle formation. Histologically there is spongiosis

and vesiculation of the epidermis, together with cellular infiltration and some dilatation of the vessels of the cutis

Urticarial response The cutis is the shock tissue There is edema caused by extravasation of fluid and cells through the capillary walls Clinically there is wheal formation *Reaction time varies from a few minutes to 20 minutes and is* usually accompanied by itching There may be a familial tendency

Urticarial lesions are induced by foods drugs insect allergens inhalants foci of infection and other endogenous agents *Contact urticaria is rare* but may occur because of transepidermal penetration The precipitating factors productive of urticaria are vasomotor instability and metabolic and gastrointestinal disturbances

Scratch and intracutaneous tests are used as diagnostic measures. Care must be exercised in intracutaneous testing to prevent severe reactions such as asthma Scratch testing is safer and less expensive but is not as sensitive as intracutaneous testing The initial local red reaction (erythema) at the site of trauma starts in 3 seconds and reaches its maximum in 45 seconds it is independent of the nerve supply as it is caused by dilatation of capillaries The second phase or flare is manifested by intensification and spread of the erythema through an axone reflex and is caused by the dilatation of the smallest arteries. The third phase is a local increased permeability of blood vessels which produces edema and is independent of nerve supply *This triple response* may be elicited by 3 types of substances (1) primary urticariogenic substances such as histamine morphine atropine or scopolamine (2) stroking of the skin (dermographism) (3) true allergic urticarial sensitivity

Theoretically the urticarial response may be caused by histamine or a histamine like substance which is elaborated by the damaged cell It may *be an antigen antibody* union with or without histamine liberation

Tuberculin Type Reaction

This is a delayed hypersensitivity reaction to tuberculin which develops in 24 to 72 hours The shock tissue is the midcutis Testing is done by the scratch or intradermal method Clinically there is erythema infiltration and papule formation Histologically it is marked by vascular dilatation and cellular infiltration It is usually caused by an allergic response *to bacterial or* fungus products but foreign sera plant extracts and simple chemicals may also cause a tuberculin type reaction The response is not associated with a familial tendency or eosinophilia Antibodies cannot be demonstrated by passive transfer

Atopic Dermatitis

The *term atopy literally means strange disease* Patients with atopic dermatitis usually have a family history of other atopic disorders such as allergic rhinitis asthma migraine urticaria or gastrointestinal disturbances Eosinophilia is a common finding Positive intracutaneous tests or scratch tests, and passive transfer antibodies (Prausnitz Kuestner) may be demonstrated *Anaphylactoid reactions* may develop in patients with atopy necessitating caution in the administration of foreign proteins. An atopen is the specific substance which produces the atopic state It may be an inhalant ingestant or contactant

Skin testing is not an absolutely definitive diagnostic measure Atopic individuals have a propensity to react to many *injected test allergens* but may not react to them on clinical contact There is a strong psychogenic component which modifies the clinical reaction to the allergen

Atopic dermatitis is an eczematous condition Testing is done by scratch or intradermal methods which cause an immediate urticarial response Inhalants and ingestants are *the substances most frequently used in testing Extreme caution* must be exercised in intracutaneous testing because of the possible production of a severe constitutional reaction *In childhood the* approximate ratio of positive reactions to foods *versus* inhalants is 2.5 to 1 in adolescence inhalants predominate A positive scratch intradermal or Prausnitz Kuestner test is of no significance *if a reaction is* not obtained on clinical exposure to the allergen Approximately 50 per cent of persons with atopic dermatitis have other *atopic diseases and it is seldom possible*

to recognize the offending allergen in these cases. Multiple allergens may be responsible for the production of clinical symptoms in a single individual.

Contact Dermatitis

Contact dermatitis may be caused by a primary irritant or a sensitizing substance. A primary irritant produces its response by actual physical damage to the skin. Examples of primary irritants are strong acids, alkalis, phenol, and mustard gas. Some substances act as a primary irritant or allergen, depending upon the concentration which comes in contact with the skin.

An allergic contact dermatitis is a true sensitization phenomenon. The allergic state is usually induced by a simple chemical (haptene) conjugated with a larger molecule (schlepper). The sensitizing substances, which do not produce detectable antibodies, are in monocytes, lymphocytes and plasma cells. It is thought that sensitivity is spread by the superficial lymphatics. The entire body surface may be sensitized no matter where the sensitivity reaction develops.

Allergic contact dermatitis is an acquired specific alteration in the capacity to react. It is a true allergic reaction.

Detailed history and careful observation are important steps in the investigation of *allergic contact dermatitis*. The sensitizing material may be contacted at home, at work, at play, or in transit. *Allergic contact dermatitis* is usually eczematous; however, substances such as silk or morphine may cause an urticarial response.

The patch test is the diagnostic method of choice. Patch testing is performed by placing the moistened, suspected agent on the skin of the patient and covering it with a nonmedicated band aid or an elastopatch. Volatile agents such as perfume are left uncovered. In 24 to 48 hours the covering is removed and the intensity of the reaction recorded. A delayed *positive test* may not appear for 72 hours. A positive reaction varies from simple erythema to bleb *formation* and necrosis.

Patch testing must be carefully performed. The test material must be in proper dilution since it may act as a primary irritant in 5 per cent concentration or as a true sensitizer in 3 per cent concentration. The positive test must be interpreted in the light of previous exposures. If the reaction is urticarial or pustular it may be caused by heat and maceration produced by covering.

A negative test may not be significant clinically. According to the general rule previously mentioned, the sensitivity may be local and not reproduced at the test site. The patient may be in a *refractory stat*. Patch testing cannot exactly simulate clinical conditions.

No discussion of contact dermatitis is complete without consideration of the "broadening of the allergic base." This term implies that an individual with an allergic contact sensitivity to one or more substances may develop sensitivity reaction to other substances. Other allergic manifestations may develop. It is important diagnostically, therapeutically and particularly in the field of occupational disease when an affected worker fails to improve after removal from his occupational environment.

It is frequently difficult to determine whether or not an eruption is truly allergic or caused by a primary irritant. Some factors that may make an allergic eruption persist are (1) bacterial infection, (2) dyshidrosis, (3) the use of topical or oral sensitizers that cross-sensitize with the original offending allergen, (4) over treatment, (5) the itch-scratch habit perpetuated by excoriation, and (6) emotional tension.

Drug Eruption

Drug eruptions may be allergic or toxic. Toxic manifestation will occur if the dose is large enough and or the medication has a cumulative affect. Evidence on which a diagnosis of an allergic drug eruption is based includes (1) previous tolerance to the drug, (2) small doses elicit a response, (3) a cutaneous response different from that produced by its usual toxic or pharmacologic action, (4) different drugs may elicit the same response, (5) regardless of the dose an allergic response cannot be caused in all persons, (6) the absence of cumulative affect, (7) the ability of a drug to cause a specific reaction not produced by its isomer, and (8) the fulfillment of the

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criteria of the *incubation period* and *spontaneous flare*

Simple chemicals and drugs may mimic the manifestations of diseases caused by microorganisms or other allergens. There are variations in species susceptibility and immunity to simple chemicals just as there are to microorganisms.

Drugs have different degrees of ability to sensitize. A drug may cause different types of eruptions, i.e., salicylates may cause *toxic erythema, urticaria, erythema multiforme* or *purpura*. There is a tendency for certain drugs to produce a characteristic response, i.e., iodides and bromides usually cause follicular lesions, phenolphthalein and antipyrine produce *erythema multiforme* or fixed eruptions. Drug reactions are not always caused by the substance administered but may be caused by its metabolites.

Skin tests are of no value except in the eczematous drug eruptions. The diagnosis of a drug eruption is based on the type of reaction caused by a specific drug, the locations in which the eruption appears, the circumstances under which exposures may occur, and knowledge of the sensitizing potential of apparently unrelated drugs.

Fixed Drug Eruptions

The site of the eruption, but not the reaction, is fixed. The lesions are oval or round erythematous patches, occasionally associated with edema, but always leaving hyperpigmentation when the acute lesion subsides. They may be single or multiple. The original eruption may be macular, urticarial or bullous, less commonly herpetiform, necrotic, nodular, or follicular.

The involved sites may lose reactivity partially or completely, temporarily or permanently, but new areas may become sensitized. Polyvalent sensitivity may exist, so that a site which reacts to antipyrine may also erupt when phenolphthalein or barbiturates are administered.

There is no association with heredity or general health. The peripheral blood vessels are the reactive site, and skin testing is of no value. The challenging dose is administered orally or parenterally.

Allergic Dermatoses Caused by Physical Agents

A dermatosis caused by a physical agent, if considered allergic, must conform to the criteria of allergy. Physical agents can cause true allergic reactions as well as nonallergic dermatoses caused by primary irritation. The offending substance is probably a normal metabolite produced by action of the specific physical stimulus. It acts as an allergen only in susceptible individuals.

Eczematous and polymorphous light eruptions. An eruption caused by sunlight may be the result of (1) formation and release of increased numbers of normal metabolites with an exaggerated response (sunburn), (2) formation *and release of normal metabolites* with an abnormal response (allergic), (3) formation and release of abnormal metabolites causing irritation, and (4) formation and release of abnormal metabolites causing an allergic response.

Phototoxic reactions involve the absorption of light and the transference of its energy to vulnerable tissue.

Photoallergic responses appear only after a suitable incubation period and thereafter may be reproduced within 24 hours. They cannot be produced on all individuals. All photoallergic responses are caused by photodynamic action, but all photodynamic reactions are not photoallergic. Substances released by the damaged tissue may act as irritants or antigens. Sulfonamides, barbiturates, coal tar and chlorpromazine are types of photosensitizing agents. A chemical may act either as a *phototoxic or a photoallergic* stimulus.

These eruptions usually appear with greater frequency in the spring and summer months. The reaction is cumulative. The lesions usually develop on the backs of the hands and fingers, the lateral aspects of the wrists and forearms, the forehead, the nose and the cheeks, and the V of the neck.

Polymorphous light eruptions include (1) erythema with or without edema, (2) erythema multiforme, (3) acute or chronic eczema, and (4) papular urticaria or prurigo.

Exposure to sunlight may cause transient erythema (occasionally associated with edema) lasting from several minutes to an hour. Erythema multiforme-like eruptions are more commonly seen and are difficult to distinguish from *acute lupus erythematosus*. An eczematous response with papules and vesicles is a frequent development. Single pink, indurated plaques with telangiectasia, lichenification and scaling may occur on the cheeks and neck.

In congenital porphyria there is exquisite sensitivity to sunlight with the development of bullae on the face and hands. In *porphyria cutanea tarda* increased pigmentation, papules, papulovesicles and eczematization form the cutaneous clinical picture.

Solar urticaria is a cutaneous reaction caused by exposure to the sun and develops on the exposed area. Shock and collapse may occur. It is frequently associated with solar eczema, may begin at any time in life and may be recurrent. As with other light sensitive states, the condition predominates in females.

Hypersensitivity to heat may be manifested by generalized *urticaria* brought on by emotional stress, heat and exercise or localized *urticaria* caused by local application of heat.

Cutaneous sensitivity to cold. The most common cutaneous reaction on exposure to cold in patients with *cryoglobulinemia* is *purpura*. Other changes are cold urticaria, Raynaud phenomenon, necrosis, ulceration, and conjunctival, oral, nasal and retinal hemorrhages.

Syphilitic paroxysmal cold hemoglobinuria is caused by hemolysin that unites with erythrocytes on exposure to cold and causes hemolysis on rewarming in the presence of complement. It is clinically manifested as hemoglobinuria. In cold urticaria associated with this entity passive transfer antibodies may or may not be demonstrated.

In *cold hemagglutination* there is agglutination of homologous or heterologous erythrocytes at low temperatures. High titres of cold hemagglutinins occur in primary atypical pneumonia, infectious mononucleosis, hemolytic anemia and other diseases.

Essential cold urticaria is the most common form of cold urticaria and may be manifested by wheal formation or diffuse swelling. The triple response occurs and histamine is released. The two types of essential cold urticaria are acquired and congenital.

Acquired cold urticaria comes on suddenly. The eliciting factors include insect bites, viral diseases, horse serum injections, foci of infection, drugs, and emotional stimuli. Patients frequently have a personal or family history of atopy. Urticaria is usually manifested on the exposed areas but may be generalized.

Allergy of Infection

This type of allergy is an acquired specific alteration in the capacity to react to infection or to exposure to microorganisms and/or their products. It may develop as a state of decreased reactivity, increased reactivity or immunity. The diagnostic intradermal tests are done by using killed microorganisms, their extract or products.

Primary allergic lesions may be associated with the appearance of secondary lesions called "ids." Infection on the feet with a dermatophyte may lead to the development of an allergic eruption (dermatophytid) on the hands. The criteria of a microbid eruption are (1) the causative organism must be demonstrated in a classical manifestation of the disease, (2) the organism cultured from the primary lesion must be a pathogen, (3) a positive skin test analogous to the tuberculin or trichophyton reaction must be present, (4) an "id" should be seen as a frequent sequela of the primary lesion, (5) microbid must develop subsequent to the primary infection, (6) the microbids must be sterile, and (7) tendency to spontaneous involution after healing of the primary focus.

The "id" reaction is caused by the organism or its products. This phenomenon occurs not only in association with bacterial and fungus diseases but also in eczematous conditions where infection is superimposed on the primary site.

Chapter 8

OCCUPATIONAL DERMATOSES

An *occupational dermatitis* is a skin eruption produced by contact with a material or materials which a patient handles during the course of his work. A previously existing dermatosis which has been aggravated by such materials is also classified as an occupational disease even though the factor causative of the original eruption was not related to the job in any way. The State Industrial Accident Commissions in the United States report that skin eruptions constitute approximately 60 per cent of all medical diseases reported to the compensation boards. The increase in incidence of industrial dermatoses during the past 25 years may be attributed in part to the introduction of many synthetic materials. Practically every substance used in modern industry is either a potential sensitizer or a primary irritant. The industrial dermatologist is actually a specialist in his own right and must possess the qualities of safety engineer, clinician and chemist as well as a knowledge of forensic medicine.

There are many facets in the problems of industrial dermatology which require careful scrutiny. If a person who has psoriasis, seborrheic dermatitis or an eczematous eruption is employed in an industry where he is subjected to contact with oil, soap, chemicals or inhalants, the original condition may be aggravated by such contact and therefore be considered by the State Industrial Accident Commission as an occupational disease. Preemployment examinations are of great value in excluding persons with such conditions. If an individual sustains a minor injury during the course of his work and is treated by the plant nurse with an antiseptic ointment or solution or one of the antihistamine ointments to which he is sensitive, a reaction may develop which will be far more extensive than the original minor injury. If the physician, first aid man or nurse at the plant applies some sensitizing medication to a nonoccupational disease or injury, the dermatitis which develops is considered an occupational illness, and is compensable. Before any medication is prescribed for a suspected occupational disease, the diagnosis should be established and the relationship of the eruption to the industry should be proved.

Unfortunately some industrial physicians consider a dermatitis as occupational merely because the type of work the patient does is frequently productive of eruptions in fellow workers. It is possible that the dermatitis which developed may have been caused by some nonindustrial exposure to substances such as hair dye, toilet articles, paint, household detergents, plants, or materials handled during the pursuit of a hobby. Careful patch testing may exclude these things, although a positive patch test does not necessarily mean that the substance which produced the test reaction was responsible for the development of the dermatitis. The test substance may have been a primary irritant. The converse of this is also true. A negative patch test is not necessarily conclusive evidence that the dermatitis is nonoccupational. The areas tested may not be hypersensitive and the test never accurately reproduces the actual conditions under which the patient worked.

The physician should have first hand knowledge of the type of work the patient does and the industrial hazards involved. In order to gain this information it may be necessary to visit the scene of operations and personally investigate the situation.

Among the various causes of industrial dermatoses are:

1 Specific trauma such as fissures on the finger tips observed in those who pack glassware in stripped paper or callouses on the palms of carpenters.

2. Specific infections such as erysipeloid observed in fishermen sporotrichosis in gardeners, and pyoderma on the fingers of butchers.

3. Insect bites are observed in poultry workers, animal handlers, and farmers.

4 Chemical substances may produce occupational dermatoses of various types. Strong acids and alkalies are primary irritants and produce burns other chemicals are sensitizing substances and produce eruptions similar to poison Ivy dermatitis Serious and sometimes fatal sequelae may follow prolonged exposure to inorganic arsenic chromic acid, and other chemicals.

5 Plants of various types, including fruit vegetables weed and flowers are capable of producing a state of hypersensitivity Dermatitis venenata due to *Rhus* plants may develop in graveyard employes, telephone linemen and gardeners.

6 Various reactions may be encountered in the synthetic rubber industry other than sensitization to the finished product One of the component part of synthetic rubber agerite alba, may produce depigmentation of the normal skin Temporary hair loss is another hazard of the rubber industry

The synthesis of plastic substances involves the use of sensitizing and irritating substances such as phenolformaldehyde resin melamine sulfonamides, colors hardeners, and other chemical substances The dermatitis which develops is rarely the result of contact with the finished product but is caused by handling of the component part

The prevention of occupational dermatoses involves

1 Preemployment history and physical examination.

Evaluation of all possible industrial hazards in the plant with establishment and enforcement of safety regulations

3 An adequate well-trained medical department to diagnose and treat the dermatitis at the time it develops.

4 Establishment of the occupational origin of the disease and avoidance of treatment of non occupational diseases at the person s place of employment

5 Proper use of diagnostic procedures such as patch tests

6 Removal of the individual from contact with the suspected causative agent the day the dermatitis develops.

Chapter 9

VENEREAL DISEASES

The decrease in incidence of infection and introduction of antibiotic drugs in the therapy of venereal diseases during and following World War II caused a decline in clinical and laboratory research in venereology. Recent reports indicate a sharp increase in incidence of infectious syphilis. Adequate statistics are not available for chancroid, lymphogranuloma venereum and granuloma inguinale, but there is a high incidence of gonorrhea. The medical student and practitioner should have a knowledge of the more important clinical and laboratory features of these five diseases.

Syphilis

Syphilis is a chronic relapsing disease caused by the *Treponema pallidum* (*Spirocheta pallida*) and is characterized by long periods of clinical remissions, during which the only evidence of disease is a positive serologic test. The disease is systemic within a few hours after inoculation and during its course any organ in the body may become involved. The *Treponema pallidum* is a highly refractile spiral organism, 6 to 20 μ in length with 6 to 20 equidistant regular spirals. The organism rotates on its long axis and is visible in the viable state only by the use of the dark field microscope.

Following an incubation period of ten days to several weeks, the primary lesion or chancre usually appears. In untreated patients, successive stages known as secondary, latent and late syphilis may occur. The disease is not hereditary but may be transmitted to the fetus *in utero* producing congenital syphilis.

It has been estimated that approximately 25 per cent of all untreated patients with syphilis are spontaneously cured.

Histopathology of syphilis. The fundamental histopathologic findings in all clinical lesions of syphilis consist of a perivascular infiltrate of plasma cells and lymphocytes, thickening of vessel walls and obliterative endarteritis. The early infiltration of polymorphonuclear leukocytes in primary syphilis is replaced by plasma cells and lymphocytes. In secondary syphilis the cellular infiltrate extends deep into the cutis. It is difficult to distinguish the chronic granulomatous picture of late syphilis from that of tuberculosis. The characteristic pathologic changes include vascular occlusion, central caseation necrosis surrounded by epithelioid cells and foreign body giant cells, and a peripheral plasma cell infiltrate.

Primary syphilis. The primary lesion, initial sclerosis, or chancre is the first clinical lesion to appear (Fig. 18). It is usually a single ulcer with a firm base and is relatively painless, although chancres may also be soft, multiple and painful. Approximately 95 per cent of all initial lesions occur on the genitalia and the remainder on the lips, fingers (e.g., dentists, physicians) and other parts of the body. In women, the chancre usually occurs on the cervix and may be overlooked unless a speculum examination of the vagina is performed.

The chancre will heal regardless of treatment. The serologic test may not be positive until the chancre has been present 1 to 3 weeks. A positive dark field examination is the only means of establishing the diagnosis.

Secondary syphilis. After a few weeks to two or three months following appearance of the chancre, the patient may develop one or more signs of secondary syphilis. During this period of generalized spirochetemia every organ in the body is invaded by the *T. pallidum*.

Cutaneous lesions of secondary syphilis may be

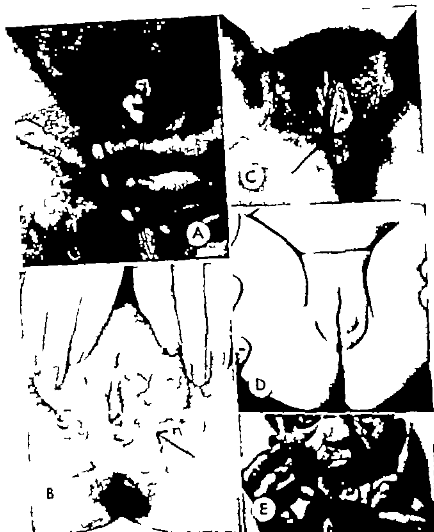


Fig. 11. A, Chancre on penis and granuloma inguinale in the right inguinal region. *B* and *C*, Chancre of vulva. *D*, Chancre of vulva in an infant. *E*, Chancre of lip.

macular, papular, or pustular (Fig. 10). Macular syphilis is pinkish in color and simulates pityriasis rosea. Papular secondary syphilis may be recognized by the characteristic groups of small papules, annular papular lesion frequently seen around the mouth, or the larger lenticular papules. Papular lesions usually exhibit the characteristic raw ham or copper color. Hypertrophic eroded papules known as condylomata lata occur in the genitocrural and perianal areas. These moist lesions are covered with a grayish exudate and are almost invariably dark field positive. Pustular syphilis, an uncommon manifestation, is limited to Negroes.

Occasionally more than one type of lesion is seen in a patient. The palms and soles may show infiltrated macules which have the characteristic color. The chancre may still be present when secondary lesions appear.

Syphilitic alopecia presents a characteristic moth-eaten appearance.

Other manifestations of secondary syphilis. Iridocyclitis may occur and usually responds well to treatment. Mucous patches are erosive lesions



FIG 19 Manifestations of secondary syphilis lesions A Annular papular B Papular C Moth-eaten alopecia D and F Lethymatous F Condyloma lata

of the mouth. The edema associated with syphilitic pharyngitis may cause temporary deafness by blocking the eustachian tubes. Deafness may also occur because of the swelling of the sheath of the eighth nerve

Lipoid nephrosis is an infrequent complication of secondary syphilis Occasionally meningitis develops in secondary syphilis, simulating acute meningitis from other causes

The serologic test for syphilis is almost invariably positive in high titer in secondary syphilis.

Latent syphilis If secondary syphilis is not treated the lesions involute and the patient enters a stage of asymptomatic infection detectable only by serologic tests During the first two years of infection this stage is known as early latent syphilis and afterward is called late latent syphilis. This arbitrary division is for prognostic purposes, the highest percentage of serologic reversals occurring in early syphilis

In late latent syphilis, the serologic test may remain positive for the life of the patient regardless of the amount of treatment administered

Following the period of asymptomatic infection the patient may exhibit cutaneous or systemic late manifestations of the disease

Late cutaneous syphilis Cutaneous lesions of late syphilis are known as gummas These may be solitary or multiple (Fig 20) A solitary gumma begins usually as a subcutaneous nodule which undergoes liquefaction necrosis forming a cup shaped relatively painless ulcer Nodular serpiginous syphiloderm and nodulo-ulcerative syphiloderm are other forms of gummatous syphilis Gummas respond well to treatment

Cardiovascular syphilis Syphilis causes an obliterative endarteritis of small arteries among which are the *vasa vasorum* of the aorta Occlusion of these arteries weaken the muscular coat of the aorta eventuating in a tortuous and dilated



Fig. 20 Manifestations of late syphilis. A Gumma. B Charcot Joint. C Nodulo-ulcerative

vessel. The myocardium and aortic valve are also involved.

Uncomplicated syphilitic aortitis is difficult to diagnose by physical examination. Roentgenograms are not necessarily diagnostic since syphilis is not the only disease which causes a dilated, tortuous aorta. The condition may be asymptomatic or the patient may complain of vague substernal discomfort. A tympanitic aortic second sound in a normotensive patient under 50 years of age who has a positive serologic test for syphilis, should make the examiner suspicious of syphilitic aortitis.

Aortitis occurs more frequently in Negroes than Caucasians. Patients who have been adequately treated for early syphilis are protected against the development of syphilitic cardiovascular disease.

Stenosis of the coronary ostia may cause typical symptoms of angina of effort or vague complaint of substernal discomfort. There may be no electrocardiographic evidence of the disease. Aortic insufficiency may or may not be present. Vasodilator may fail to relieve the patient. Digitalis is indicated in the presence of imminent heart failure.

Aortic insufficiency is frequently asymptomatic until the patient has the first episode of heart failure. Paroxysmal nocturnal dyspnea may be present. Differential diagnosis from hypertensive and arteriosclerotic cardiovascular disease is difficult. The pulse pressure is widened and the diastolic pressure is low. Pistol shot sounds are heard over the femoral artery without the use of the blood pressure cuff. A diastolic murmur is heard at the base of the heart and there may be an associated presystolic murmur at the apex (Austin-Flint). Left ventricular hypertrophy is present. Electrocardiographic changes are not specific.

Specific therapy of cardiovascular syphilis is probably of little value. The patient should be treated with supportive measures such as digitalis, salt-poor diet, limited fluids, nitroglycerine, rest, sedation, and ammonium chloride or other diuretics.

Aneurysms of the thoracic aorta are more common than aneurysms of the carotid, subclavian or innominate arteries. Syphilitic aneurysms are saccular and may grow to large size, occasionally eroding through the chest wall or vertebrae. Symptoms may be absent or severe. Diagnosis is made by routine x-ray procedures and physical examination.

Neurosyphilis. Abnormal spinal fluid findings

occur in 5 to 7 per cent of all patients with early syphilis. Of these only few develop clinical neurosyphilis. Laboratory abnormalities in most patients represent invasion rather than involvement and demonstrate the body's reaction to the generalized spirochetosis. Adequate therapy of early syphilis protects the patient against neurosyphilis, but inadequate therapy may predispose to neurorecurrence or late forms of symptomatic neurosyphilis

Nonparenchymatous neurosyphilis This implies involvement of the blood vessels or meninges, or the formation of gummatous lesions

Meningitis may occur spontaneously in the first two years of infection or may follow inadequate therapy It is characterized by cranial nerve palsies papilledema or convulsions. Spinal fluid findings include pleocytosis and positive complement fixation tests, but the total protein and colloidal curve are usually within normal limits It responds well to treatment

Vascular neurosyphilis results from obliterative endarteritis of the small branches of the middle cerebral artery or other arteries. Symptoms are those of a focal vascular accident the clinical syndrome depending on the area involved Since this is a vascular lesion the cerebrospinal fluid may be normal This diagnosis should be suspected in a young normotensive patient whose serologic test for syphilis is positive Response to treatment is usually good without sequelae

Meningovascular neurosyphilis is the most frequently encountered form of symptomatic neurosyphilis, combining the symptoms of meningitis with the effects of vascular damage, as epilepsy cranial nerve palsies anisocoria, fixed pupils or vascular accidents Prognosis is usually good following adequate therapy Spinal fluid findings vary

Asymptomatic neurosyphilis is diagnosed by laboratory findings. Every patient who has syphilis should have a spinal fluid examination to rule out asymptomatic infection of the central nervous system since the parenchyma may become involved late in the course of the disease. Laboratory findings vary

Gumma of the brain may be single or multiple Symptoms are those of other tumors of the central nervous system and vary with the location The blood serologic titer is usually high and the complement fixation reaction in the spinal fluid may reflect this by reagin carry-over

Syphilitic hypertrophic cervical pachymeningitis is rare and treatment is of little benefit. It must be differentiated from cervical disc.

Parenchymatous neurosyphilis may be inflammatory or degenerative

General paresis also known as general paralysis of the insane encephalomalacia or syphilitic encephalomyelitis, is a destructive inflammatory process which if untreated will eventually kill the patient Early symptoms include irritability fatiguability forgetfulness personality changes, headaches weight loss disturbed sleep and loss of competence. Later the memory becomes grossly impaired judgment becomes defective and the patient suffers from emotional instability lack of insight confusion disorientation delusions and convulsions. Objective signs of paresis are pupillary abnormalities, perioral tremor hyperreflexia dysarthria tremors of the tongue hand and face muscles, and Babinski reflex

The blood serologic test is invariably positive in high titer and the spinal fluid is strongly positive Paresis usually develops 5 to 15 years after onset of the disease

The most common type of paresis is simple deterioration in which there is a gradual loss of the finer qualities of personality which distinguish the individual Expansive mania paranoia and agitated depression also occur in paresis Lissauer's paresis begins as focal epilepsy

Juvenile paresis occurs in late congenital syphilis between the ages of 6 and 15 years

Paresis responds to treatment with penicillin. Fever therapy is no longer necessary or recommended except in unusual cases

Tabes dorsalis or locomotor ataxia is a degenerative disease of the posterolateral columns which usually begins 20 or more years after the infectious stage of syphilis Cerebral involvement is limited to pupillary abnormalities, extra-ocular motor palsies and primary optic atrophy

Argyll Robertson pupils are fixed to light but

react in accommodation. They are persistently miotic and react poorly to mydriatics. The visual pathways are intact.

Early symptoms of tabes dorsalis are lightning pains paresthesias urinary disturbances such as dribbling and hesitancy diminished libido and potentia, cystometric evidence of loss of bladder sensation, diminished or lost deep tendon reflexes, and diminished vibratory and position sense. Later incontinence and nocturnal bed wetting may occur as well as visceral crises (gastric, rectal, bladder or laryngeal) difficulty in walking, cord bladder trophic joint changes (Charcot joint) and ataxia.

Since tabes dorsalis is a degenerative disease the spinal fluid findings may be normal. Tabes dorsalis responds poorly to treatment.

Primary optic atrophy may occur independently or be associated with tabes dorsalis. The nerve head degenerates to complete blindness. Treatment is ineffectual

Erb's spastic paraplegia is a degenerat ve in volvement of the anterior horn cells and anterolateral tracts. The motor paralysis of extremities and bladder does not respond to treatment

Adie's syndrome simulates tabes dorsalis but has no relation to syphilis The symptom complex includes hyporeflexia of the lower extremities, and pupils which react to neither light nor accommodation.

Interpret tion of serologic test fo syphi lis The diagnosis of yphilis depends on careful evaluation of the patient's physical status the history and the laboratory findings.

Routine serologic tests for yphilis (STS) include complement fixation and flocculation (precipitation tests

The complement fixation reaction is Wasser mann application of the Bordet-Gengou phenomenon The test has been modified t increase sensitivity and selectivity by Kolmer Eagle, and others Patient serum is mixed with antigen (beef heart extract) and complement (guinea pig serum) Sensitized sheep red corpuscles are added as indicator If hemolysis takes place the test is negati e

The flocculation test depends on the formation of a precipitate when a syphilitic patient's serum is mixed with beef heart extract. Sensitivity and selectivity of the tests depend on the degree of purification of the beef heart extract (cardiolipin) and addition of substances such as lecithin, cholesterol, and buffers. The pH and temperature also influence the reaction. Generally acceptable modifications are the Kahn Kline, Hinton Mazzini Eagle, and Venereal Disease Research Laboratory tests.

Tests may be qualitative or quantitative Qualitative tests are performed on whole serum and are reported as positive doubtful or negative Venereologists generally have discarded the system of reporting tests as one two, three or four plus. Quantitative tests should be performed on sera reported as positive Standard dilutions are 1 2 1 4 1 8, 1 16 1 256 The titer is read as the highest dilution at which a positive test is obtained. Quantitative tests, when properly interpreted, may be of value in determining the activity of infection or results of therapy

Spinal fluid examinations should be performed on every patient who has syphilis. In patients with early syphili the test should be done 6 months after treatment is completed In all other patients, the fluid should be examined before treatment is instituted unless there is a specific contraindication. In pregnancy the test may be withheld until after delivery

Four tests should be done on every spinal fluid cell count, total protein colloidal curve (optional) and complement fixation reaction Of these a positiv complement fixation reaction is the only test which indicates the presence of syphilis. The cell count should be done within an hour after removal of the fluid. Normal range of cells is usually considered 0 to 10 Total protein may vary up to 50 mg. per cent, according to the method used Cum mastic is preferred in the colloidal curve test.

Spinal fluids may be classified as

Group I Negative complement fixation, but abnormalities in one or more of the indices of activity

Group II Positive complement fixation reaction with or without abnormalities in other tests

Group III All tests abnormal

Treponemal immobilization tests utilize suspensions of the *Treponema pallidum* as antigen This test measures a specific antibody other than reagin and is more selective than the standard serologic test for syphilis. The test may be done as a complement fixation reaction or an agglutination test

Temporary biologic false positive tests for syphilis may be caused by upper respiratory infections, vaccinations infectious mononucleosis malaria and other conditions Moore s studies indicate that some individuals have a *persistent biologic false positive serologic test* and that this may be an indication of subclinical collagen vascular disease It is estimated that as many as 40 per cent of asymptomatic patients with persistently positive serologic tests for syphilis but no history of infection do not have syphilis

Congenital syphilis Although syphilis is not hereditary the fetus may be infected *in utero* The child with congenital syphilis develops stigmas of the disease which may be characteristic

A newborn infected infant may exhibit a bullous eruption cutaneous eruptions of other types, or visceral involvement

Frequently encountered stigmas of late congenital syphilis include scaphoid scapulas high-arched palate bowing of the forehead and saber shins Manifestations of late congenital syphilis include interstitial keratitis eighth nerve deafness and Hutchinson s teeth Interstitial keratitis and eighth nerve deafness may occur during any period of the patient s life Hutchinson s teeth (Fig 21) are peg-shaped notched deformities of the second dentition upper central incisors Paroxysmal cold hemoglobinuria and hydrarthosis (Clutton s joints) are other late manifestations of congenital syphilis.

The heart and great vessels are not involved in congenital syphilis Congenital parenchymatous neurosyphilis varies in its manifestations.

Syphilis and pregnancy The fetus does not become infected until after the fourth month therefore treatment of maternal syphilis before the fifth month of pregnancy prevents transmission of infection to the child Effective treatment may be instituted as late as the eighth month Treatment with penicillin during any pregnancy will prevent fetal syphilis in subsequent pregnancies, unless the mother is re-infected

Treatment for syphilis Arsenic bismuth and mercury are no longer used in the treatment of syphilis Early infectious syphilis may be treated with procaine penicillin A total of 4.8 to 6 million units is administered in divided doses in 6 to 10 days As an alternate method the patient may be given two weekly doses of 2 4 million units of Bicillin The same treatment regimes are sufficient for latent and late cutaneous syphilis. Patients with cardiovascular syphilis and neurosyphilis should receive approximately 10 million units of penicillin in divided doses. In the light of present knowledge the beneficial effects of fever therapy are doubtful.

The practitioner should remember that reversal of the serologic test may be delayed or the test may remain permanently positive. A persistently positive serologic test for syphilis following adequate therapy is not an indication for retreatment



Fig 21 Manifestations of congenital syphilis Saddle nose and Hutchinson teeth

Reactions to treatment include allergic reactions to penicillin and specific reactions associated with the treatment of syphilis. The *Herxheimer* reaction is an intensification of syphilitic lesions or a febrile response in the first 24 to 48 hours following institution of therapy. The *therapeutic paradox* is irreversible damage produced by contractile scarring in the healing process.

Gonorrhea

Gonorrhea is a disease of the genitourinary tract caused by *Neisseria gonorrheae*.

Gonorrhea in men begins as anterior urethritis 4 to 90 hours following exposure. It is manifested by a thick yellowish purulent discharge. If the infection is untreated, chronic posterior urethritis develops, manifested by a scant mucoid discharge. Complications may include epididymitis, arthritis, prostatitis, conjunctivitis and septicemia.

In women, gonorrheal urethritis may occur but the infection usually begins as cervicitis. Symptoms may be minimal or absent in this stage of the disease. Retrograde infection involves the fallopian tubes, causing pyosalpinx. Systemic complications may occur.

Diagnosis of gonorrhea in the male is made by microscopic examination of a smear of the urethral discharge stained with Gram stain. The organism is a Gram-negative intracellular diplococcus. Culture of the cervical discharge is necessary to diagnose gonorrhea in women.

Treatment. Penicillin is the drug of choice in the treatment of gonorrhea. A single injection of 300,000 to 600,000 units is sufficient. It is imperative to treat both sex partners. Cure of the



Fig. 22. Lymphogranuloma venereum. *A* and *B*. Draining sinuses in left inguinal region. *C*. Genital distortion.



Fig. 23. Granuloma inguinale. *A*. Destruction of female genitalia. *B*. Involvement of anus and buttock. In male. *C*. Distortion of male genitalia.

disease does not confer immunity against reinfection Serologic tests for syphilis must be performed when the patient is treated and monthly for 3 months thereafter

Chancroid

Chancroid is a disease of the genitalia caused by *Hemophilus ducreyi* The initial lesion is a small papule or vesicle which erodes forming a ragged ulcer with a necrotic base and undermined edges The ulcers are usually multiple, soft and painful. Regional lymphadenopathy may develop (buboes)

Hemophilus ducreyi is sensitive to penicillin in vitro but because of the danger of masking early lesions of syphilis, sulfonamides are the drugs of choice in treating the disease

Chancroid may be diagnosed by culturing organisms from ulcers. The Ito-Reenstierna test consists of an intradermal injection of killed *organisms* or diluted sterilized bubo pus A positive test is not diagnostic of active infection but indicates antibody formation

Lymphogranuloma Venereum

Lymphogranuloma venereum is a systemic disease caused by a filtrable virus The initial *lesion is transient* and is frequently ignored Most patients with lymphogranuloma venereum are asymptomatic The disease is disseminated through the lymphatic system In men inguinal buboes may develop but in women the lymphatic drainage involves the deep peri *rectal and pudendal* nodes (Fig 22) Delayed manifestations in women may include rectal stricture

Presumptive diagnosis is made by association of clinical symptoms with a positive Frei test The Frei test consists of intradermal injection of a diluted sterilized culture of the virus on chick embryo or mouse brain or of a diluted sterilized suspension of bubo pus

Treatment of lymphogranuloma venereum is *unsatisfactory Proctitis may* be controlled by sulfonamides or broad spectrum antibiotics.

Granuloma Inguinale

Granuloma inguinale is a systemic disease usually limited to the genito-crural area (Fig. 23) It is caused by *Donovania granulomatis* (Donovan body) *The disease is limited almost entirely to* Negroes.

The initial lesion of granuloma inguinale is a subcutaneous nodule which ulcerates, forming a shallow indurated granulomatous ulcer It spreads peripherally without involving lymphatics. The ulcers tend to heal spontaneously with dense de*forming scars* which *occasionally obstruct* lymphatics, causing a brawny edema known as esthiomene Oral osseous and visceral lesions may occur

The mode of transmission of granuloma inguinale is unknown The diagnosis is made by demonstration of Donovan bodies in stained smears (Wright s or Giemsa stain) from ulcers. The histopathologic picture of stained sections of tissue from active lesions is nonspecific.

Granuloma inguinale responds to oral treatment with tetracycline oxytetracycline chlortetracycline *chloramphenicol* and erythromycin Streptomycin and dihydrostreptomycin administered parenterally are effective. Penicillin is of no value in the treatment of granuloma inguinale.

Chapter 10

PSYCHOSOMATIC MEDICINE APPLIED TO DERMATOLOGY

The relationship of the integument to internal organs and systems is emphasized throughout this text. Infiltrated plaque-like lesions on the legs may indicate thyroid-pituitary disease, and yellow nodules about the elbows or knees are associated with lipoid disturbances or diabetes mellitus. Erythema marginatum may be the first manifestation of rheumatic fever. These are examples of cutaneous manifestations of organic diseases. Skin conditions *which are caused by* or *influenced by the psyche* and which, by their disfiguring appearance, cause mental aberrations are of equal importance.

Dermatoses Directly Associated with Psychic Disturbances

The objective symptoms of the dermatoses described below are caused by the *emotionally disturbed or psychotic patient.*

Acarophobia or *parasitophobia* is a disorder in which the patient has delusions of parasite infestation. Pieces of detritus or epithelial debris are forcibly removed by the patient from the skin, often deeply enough to cause ulcers. These particles of material are brought to the doctor with the insistent statement that they were alive when removed. Psychotherapy is necessary for these people.

Dermatitis factitia, feigned eruption, or *malingerer's disease* is deliberately caused by the patient with a desire to gain sympathy, collect compensation, or evade undesirable duty. These lesions may be excoriations or may be caused by application of caustic materials, hot metal, etc., and frequently have bizarre appearances.

Neurotic excoriations are the result of unconscious or uncontrollable scratching of accessible areas of the body. The lesions may be widespread or localized to a small area such as the occipital region (localized neurodermatitis).

Trichotillomania is a compulsive pulling or twisting of the hair, sometimes resulting in large bald areas.

Chronic sucking or biting of localized areas by mentally defective patients causes hypertrophied lesions with excessive hair growth.

Dermatoses Influenced by Emotional Tension

The role played by the psyche in influencing the course of dermatoses such as *atopic dermatitis, seborrheic dermatitis, lichen planus,* and *psoriasis* is obscure. The objective symptoms are usually intensified during periods of emotional tension, and patients frequently volunteer the information that pruritus increases when they are upset. Many patients state that the dermatoses causes no discomfort during working hours but begins to itch as soon as they relax physically.

Pruritus ani and pruritus vulvae are prevalent in emotionally tense patients, frequently necessitating the administration of sedatives or tranquilizers as adjunctive therapy.

Although verrucae are virus infections there is a peculiar influence of the psyche on the course of the disease. Not infrequently, especially in growing children, warts may be "bought," "hexed off," or cured by the oral administration of placebo or colored medications.

Alopecia areata, functional alopecia in females, seborrheic alopecia, vitiligo, and exfoliative cheili

tis are caused by or aggravated by emotional tension

Hyperhidrosis or excessive sweating is often a manifestation of anxiety or tension

All *allergic dermatoses* including urticaria, exhibit increased symptoms during periods of emotional tension

Skin Conditions In Which the Cosmetic Defect Causes Psychic Disturbances

These include acne (especially where scarring is a prominent feature) multiple neurofibromatosis rosacea large nevi psoriasis alopecia bromidrosis and congenital defects

Chapter 11

THERAPY

The accumulated experiences of many dermatologists have resulted in a group of formulas and methods which enable the practitioner to treat most dermatoses effectively.

Useful external medications include ointments, lotions, liniment, pastes and wet dressings. Antibiotics, steroids, sedatives, tranquilizers, and sulfonamides are valuable systemic therapeutic measures. Dermatologic physical therapy includes ultraviolet rays, roentgen rays, radium, cryotherapy, iontophoresis, and electrosurgery. Therapeutic agents may be classified as anti-infectious, anti-inflammatory, antipruritic, astringent, emollient, keratolytic and nonspecific agents of proven empiric value.

SYSTEMIC MEDICATIONS USED IN DERMATOTHERAPY

Anti-infectious agents. *Penicillin* is an antibiotic of limited value in acne and staphylococcic infections, but effective against most strains of streptococci. It is indicated in erysipelas, cellulitis and syphilis.

Aqueous suspension of procaine penicillin contains 300,000 units per cc., a single dose of which gives measurable blood levels for 24 to 48 hours. Bicillin, available in injectable dosage forms containing 1,200,000 units per dose, produces measurable blood levels for at least 00 hours. Penicillin for oral administration is available in tablets or capsules containing 100,000 or 200,000 units.

Adverse reactions to penicillin therapy include anaphylaxis, morbilliform or scarlatiniform eruptions, urticaria, erythema multiforme and exfoliative dermatitis.

Streptomycin and *dihydrostreptomycin* are indicated in the treatment of granuloma inguinale and cutaneous tuberculosis. Eighth nerve damage is a potential hazard.

Tetracycline hydrochloride and tetracycline phosphate (Tetracyn, Panmycin, Steclin, Achromycin) are dispensed in capsules containing 50 mg., 100 mg. or 250 mg. Suspension of these antibiotics in flavored vehicles are available for administration to children. The tetracyclines were formerly popular in the treatment of staphylococcic infections, but the development of resistant strains of organisms limit their usefulness. Small doses given over protracted period of time have been advocated as an adjunct in the management of acne.

Oxytetracycline (*Terramycin*) *and chlortetracycline* (Aureomycin) have the same actions, uses and doses as tetracycline.

Chloramphenicol (*Chloromycetin*) has a wide antibacterial spectrum which includes staphylococci, streptococci, spirochaetes, and other organisms. Development of bacterial resistance to the drug is rare. It is available in 50 mg. and 250 mg. capsules.

Erythromycin, triacetyloleandomycin and novobiocin are effective against most strains of staphylococci. Repeated courses of erythromycin therapy may produce strains of microorganisms resistant to that drug.

Nystatin (*Mycostatin*) tablets contain 500,000 units each. This drug, an antifungal antibiotic, has a specific action on *Candida albicans*. It is poorly absorbed from the gastrointestinal tract but may be useful in combination with tetracycline (Mysteclin, Comycin) or other antibiotics in the prevention of intestinal moniliasis.

Griseofulvin is an antifungal antibiotic, available in 250 mg. capsules or tablets. It has been proved to be an effective systemic treatment for *Micro-*

sporum *Trichophyton* and *Epidermophyton* infections.

Reactions to systemic antibiotic therapy include blood dyscrasias cutaneous or systemic moniliasis urticaria erythema multiforme purpura morbilliform eruptions exfoliative dermatitis lingua nigra perlèche and monilial paronychia.

Strains of organisms resistant to any of the antibiotics may develop especially in the presence of inadequate dosage Administration of specific antibiotic therapy should be controlled by *disc or tube-dilution sensitivity tests.*

Sulfacetamide sulfadiazine and sulfamerazine tablets NF (triple sulfa) contain 165 mg of each sulfonamide They are useful in the treatment of pyodermas and chancroid The combination of the three drugs is preferred because of the lessened tendency to crystalluria *Sulfapyridine* available in 0 5 gm tablets, is useful in the treatment of dermatitis herpetiformis and some bacterial infections

Adverse reactions to sulfonamides include photosensitization fixed eruptions and crystalluria.

Adrenocorticotropic hormone and corticosteroids Indiscriminate use of adrenocorticotropic hormone should be condemned since it is of value only in inflammatory or allergic dermatoses and its therapeutic value depends on a functioning adrenal cortex

The steroid hormones are anti inflammatory substances which are administered systemically to supplement the anti inflammatory hormones produced by the adrenal cortex Prolonged administration may cause atrophy of the adrenal cortex

Cortisone (Cortone compound E) is packaged in 25 mg tablets. *Hydrocortisone* (compound F Cortril Cortef Hydrocortone) is available in 10 and 20 mg tablets. *Prednisone* (dehydrocortisone) and *prednisolone* (dehydrohydrocortisone) are available as 5 mg. tablets (Meticorten Sterane Co-Deltra) Recently developed steroid are triamcinolone (Aristocort Kenacort) 2 mg. and 4 mg. tablets and methylprednisolone (Medrol) available as 4 mg tablets.

The undesirable side effects of prolonged ACTH and steroid therapy include hirsutism pseudodiabetes Cushing's syndrome hypertension psychoses electrolyte disturbances and peptic ulcers The initial dose and maintenance dose of the steroids should be adjusted to the individual patient's needs.

Sedatives and tranquilizers Control of emotional tension by systemic medication has proved to be valuable adjunctive therapy in the treatment of such dermatoses as seborrheic dermatitis neurodermatitis, lichen planus, psoriasis, pruritus vulvae and pruritus ani

Sedatives include barbituric acid derivatives such as phenobarbital Delvinal Butisol and Nembutal Bromural Placidyl and Sedamyl are sedatives not derived from barbituric acid The sedative drugs are relatively inexpensive and produce few adverse reactions

Sedative stimulant mixtures are anorexiant and *produce a sense of euphoria without over-stimulation* Syntil (Butisol and dextroamphetamine) and Ambar (phenobarbital and dextroamphetamine) are examples of this type of medication

Tranquilizing drugs such as hydroxyzine meprobamate buclizine and chlorpromazine are recommended for relief of emotional tension because of their effectiveness and relative safety in administration There is no proof of habit formation.

Rauwolfia serpentina and its derivatives have *also been used to control emotional tension* but are not recommended in the treatment of dermatologic conditions because of severe side reactions such as profound depression

Adverse reactions to tranquilizing drugs include dryness of the oropharynx depression excessive drowsiness, and morbilliform or scarlatiniform eruptions. Jaundice has been reported as a result of chlorpromazine therapy

Miscellaneous systemic medication *Calcium gluconate* may be used in the treatment of erythema multiforme chronic *urticaria generalized* pruritus and lichen planus Ten cc of a 10 per cent solution is injected rapidly intravenously producing an immediate transitory sensation of intense heat This treatment should be avoided in the presence of cardiovascular disease

Sodium salicylate may be of value in the treatment of erythema multiforme and erythema nodo-

gm. Enteric coated tablets containing 0.7 gm. each are recommended to avoid gastric irritation.

Inorganic trivalent arsenic is still prescribed by some physicians in the treatment of psoriasis, dermatitis herpetiformis, lichen planus chronic eczemas and other conditions. Its use is empiric and long continued administration may lead to serious sequelae. The usual form of administration are solution of potassium arsenite or Asiatic pills.

Antihistamines are theoretically of value in allergic dermatoses, but actually have little antipruritic action. They are mild sedatives and are indicated in the treatment of drug eruptions such as penicillin reactions.

Bismuth subsalicylate in oil is given by intramuscular injection in the treatment of lichen planus and plantar warts but is no longer indicated in the treatment of syphilis. Bistrimate is an effective oral preparation of bismuth.

Antimalarial drugs such as Chloroquin, Mepacrine, Plaquenil (and a combination of these three known as Triquin) and Amodioquin, may be used successfully in the treatment of discoid lupus erythematosus and in the treatment and prevention of polymorphic light sensitive eruptions.

The *sulfones*, primarily intended for the treatment of leprosy and tuberculosis, are also of value in dermatitis herpetiformis. An example of this drug is Aulosulfon.

Vitamins are indicated in the treatment of specific vitamin deficiencies. Large doses of vitamin C (1000 mg. daily) are indicated in pigmented purpuric eruptions. A combination of vitamins A and C in lozenge form (VI DOM AC oral tablets) may benefit some patients with adolescent acne.

Potassium iodide in adequate dosage, is useful in the treatment of sporotrichosis and other deep mycoses. It is occasionally used in the treatment of late syphilis. Potassium iodide aggravates the symptoms of dermatitis herpetiformis. It may produce pustular folliculitis which simulates acne.

Isoniazid and *para-amino salicylic acid* (PAS) are used separately or in combination in the treatment of cutaneous tuberculosis.

Methoxsoralen contains 10 mg. of drug in each capsule or tablet. The drug is useful in the prevention of sunburn and in the treatment of vitiligo.

DIETARY THERAPY

All treatment regimes for acne vulgaris should include some dietary restriction. The following foods are usually excluded:

Coffee	Eggs
Cream	Spicy food
Ice cream	Mayonnaise
Peanut butter	Soft drinks
Oleomargarine	Rich foods
Chocolat	Iodized salt
Tuna fish	Gravy foods
Nuts	Pastries

Food may be responsible for the production of such allergic conditions as urticaria, atopic eczema, and asthma. Skin testing is of questionable value in determining the etiologic agents.

Topical Applications

Ointments are the most frequently prescribed form of external medication and consist of a base and active ingredients. Ointment bases may be divided into those which are water repellant, water absorbent, water miscible (any of the commercially available vanishing creams or emulsion bases) and water soluble. Vanishing creams are better suited for acute or subacute dermatoses and greasy ointments are better for chronic scaly or dry dermatoses.

Ointment bases which may be prescribed include:

Vanishing creams (water miscible emulsions)
- Almay emulsion base
- Unibase
- Neobase

Water absorbent bases
- Aquaphor
- Polysorb
- Qualatum

Oleaginous bases (water repellant)
- Cold cream
- Petrolatum (white or yellow)
- Lard
- Lanolin and petrolatum (equal parts)
- Hydrocarbon gel (Plastibase)

Water soluble base
- Polyethylene glycol (carbowax)

Lotions are solutions or suspensions of drugs in aqueous or hydro-alcoholic vehicles to be applied to the skin without rubbing (*e.g.* calamine lotion)

Liniments are suspensions or solutions of drugs in oily or soapy vehicles to be applied to the skin by inunction (*e.g.* calamine liniment camphorated oil)

Pastes are emollient ointment-like preparations which have the ability to absorb moisture (*e.g.* Lassar's paste)

Wet dressings or compresses are solutions or suspensions applied by saturated dressings to inflamed edematous or denuded areas to soothe, reduce edema or combat infections (*e.g.* Burow's solution)

Baths are solutions or colloidal suspensions of medications in which the patient immerses his body. They are useful as emollients in extensive inflammatory conditions, such as exfoliative dermatitis (*e.g.* oatmeal or starch baths)

Paints are solutions or suspension of drugs in aqueous or hydro-alcoholic vehicles. They are essentially the same as lotion but are applied sparingly with an applicator or brush (*e.g.* *Castellani's paint*)

Dusting powders consist of active medication mixed with inert substances such as talc. Examples are deodorant powders, prickly heat powders and foot powders.

Sprays are medications applied by atomizers, nebulizers or pressure spray dispensers (*e.g.* *deodorants and steroids*)

Anti-infectious agents Local application of *antibiotic drugs which are usually administered systemically* should be avoided. Systemic sensitization may be acquired by local application and may prevent subsequent oral or parenteral use of an antibiotic in severe generalized infection

1 *Spectrocin* (neomycin gramicidin) ointment or lotion has a wide antibacterial spectrum. Indication impetigo contagiosa, acne vulgaris, ecthyma and other pyoderma

2 *Neosporin* (*polymyxin B-bacitracin neomycin*) ointment also has a wide antibacterial range. Indications pyodermas.

3 *Mycostatin* (nystatin) ointment is an antifungal antibiotic of specific value in *Candida albicans* infections

4 *Sulfonamide ointments* and *penicillin ointment* should be avoided because of sensitization reactions.

5 *Antifungal ointments* include commercial preparation such as *Desenex, Salundek, Sopronol* and *Mycozol*. It is doubtful whether these preparations are fungicidal *in vivo* although they are prescribed for all types of superficial mycoses.

6 *Ammoniated mercury ointment*

℞ Ammoniated mercury	1.5 (5 per cent) or 0.9 (3 per cent)
Liquid petrolatum	0.3
White ointment q	30.0
M et ft ung	

This is a useful and economical antibacterial and antifungal preparation

Local application of steroids

1 *Hydrocortisone ointment and lotion* Cortril, Cortef, Cort Dome 0.5 per cent or 1.0 per cent are useful in the treatment of allergic and inflammatory *dermatoses*. *Indication* atopic dermatitis, seborrheic dermatitis, neurodermatitis

2 *Hydrocortisone-antibiotic combination ointments* (Terra-Cortril, Neocortef, Cortisporin) Indications secondarily infected allergic or inflammatory dermatoses

3 *Other combinations* of hydrocortisone include Vioform Hydrocortisone cream and Cor-Tar-Quin advocated for use in chronic eczematous conditions.

4 *Prednisolone ointment and lotion* (Meti-Derm, Hydeltra ointment) 0.5 per cent and Magnacort ointment 0.5 per cent. Also supplied in combination with antibiotics. *Indications* same as hydrocortisone

5 *Fludrocortisone ointment and lotion* (Florinef, F-Cortef) 0.1 per cent and 0.25 per cent. Also supplied in combination with antibiotics. Indications same as hydrocortisone

Antipruritics Antipruritics are local anesthetics or counter-irritants which reduce itching. The following prescriptions are examples of the various types

℞ Phenol	4.5 (2.5 per cent)
Olive oil or cottonseed oil q	180.0
M et ft sol	

The concentration of phenol may be varied from 1.0 per cent to 5.0 per cent.

℞ Menthol	0.45 (0.25 per cent)
Alcohol 70 per cent q.	180.0
M. et ft. sol.	

The concentration of menthol may vary from 0.1 per cent to 0.5 per cent. If desired, olive oil may be used as the vehicle instead of alcohol. Combinations of phenol and menthol may be prescribed.

℞ Phenol	1.2
Petrolatum q.	60.0
M. et ft. ung.	

This is a simple effective antipruritic.

℞ Menthol	0.1
Zinc oxide	10.0
Bentonite	5.0
Talc q.	100.0
M. et ft. pulv.	

This is a dusting powder useful in such conditions as miliaria rubra.

℞ Zinc oxide	10.0
Neocalamine	10.0
Bentonite	5.0
Phenol	2.7
Lime water q.	180.0
M. et ft. lotio	

This is a variation of calamine lotion. If a white lotion is desired, talc may be substituted for the neocalamine.

℞ Zinc oxide	15.0
Talc	15.0
Cottonseed oil	
Lime water aa q.	180.0
M. et ft. liniment	

This preparation may be used if calamine lotion produces a severe drying effect.

℞ Liquor carbonis detergens	2.4
Almay emulsion base q.	60.0
M. et ft. ung.	

This cream is useful in seborrheic dermatitis and chronic or subacute eczema. If desired, one or two per cent crude coal tar may be prescribed in an oleaginous base instead of this cream. Oil of cade is also used for the same purpose.

Astringent and emollient. These loosely used terms denote preparations for application to intensely inflamed or edematous surfaces.

℞ Burow solution (solution of aluminum acetate)

Used as wet compresses, diluted 1:10 to 1:32.

℞ Saturated solution of boric acid

Mildly antiseptic, soothing wet compress.

℞ Oatmeal baths

These may be prepared by mixing a cup of cooked oatmeal with ½ tub of water, swishing uncooked oatmeal in a cloth bag in the water, or by using a prepared oatmeal extract such as Aveeno or "Oilated" Aveeno.

℞ Starch baths
May be prepared with cooked starch or Linit starch.

℞ Boric acid	6.0
Petrolatum q.s.	60.0
M. et ft. ung.	

Danger of percutaneous absorption of boric acid is minimal. This is a useful preparation.

Keratolytics dissolve or soften horny tissue and are used in scaly or callused conditions.

℞ Precipitated sulfur	3.0
Salicylic acid	3.0
Liquor carbonis detergens	2.4
Almay emulsion base q.	60.0
M. et ft. ung.	

Indications: seborrheic dermatitis, tinea cruris, chronic eczema.

℞ Salicylic acid	1.8
Benzoic acid	3.6
Lanolin	15.0
Petrolatum q.s.	60.0
M. et ft. ung.	

This is modified Whitfield's ointment used in epidermophytosis.

℞ Salicylic acid	3.0
Ammoniated mercury	3.0
Liquid petrolatum	15.0
Petrolatum q.s.	60.0
M. et ft. ung.	

This is a soft ointment intended for heavily crusted scalp conditions and psoriasis.

℞ Salicylic acid	10.0
Flexible collodion q.s.	30.0
M. et ft. sol.	

This should be applied to the surface of corns calluses and plantar warts to soften the horny layer

℞ Salicyl c acid 2 0
Resorcinol monoacetate *4 0*
Ether 8 0
Glycerin 8 0
Alcohol 50 per cent q.s. 180 0
M et ft sol

This scalp lotion may be perfumed or colored if desired

℞ Fostex (cake and cream shampoo)

Useful in seborrheic dermatitis especially when the scalp is oily

Parasiticides

℞ Emul ion benzyl benzoate (20 to 25 per cent) 180 0

This is used in the treatment of scabies and pediculosis The lotion is applied twice daily for *3 to 5 days*

℞ Sulfur precipitated 12 0
Lard q.s 120 0
M et ft ung

Sulfur ointment is an effective method of treating scabies but *is greasy and more difficult to* apply than benzyl benzoate.

℞ Chlorophenothan (DDT) 5 0
Talc q.s 100 0
M et ft pulv

This dusting powder is used in the treatment of pediculosis

Miscellaneous pharmaceuticals

℞ *Suspension sel nium ulfide* (Selsun suspensi n) 120 0

Indicated in seborrheic dermatitis when the scalp is dry and scaly Printed instructions on the label should be followed

℞ Vioform Qu ol and Sterosa ointment

These halogenated derivatives of hydroxyquinoline are useful in chronic eczematous eruptions

℞ *Kummerfeld loti n (camphorated ulfur l tion)* 180 0

Commercial preparations *as Resulin Sulforcin* and Pronac are more effective and more pleasant to use *in the treatment of acne vulgaris.*

℞ Alkaline aromat c solution 120 0

Diluted 1 4 with water this is a pleasant soothing mouth wash

℞ Tashan cream 30 0
or
Vitamin A and D ointment 45 0

These are vitamin creams recommended for superficial burns ulcers radiodermatitis and chronic eczema

℞ Lassar s paste (zinc oxide pa te) 120 0

Excellent for occlusive dressings or emollient paste in exudative eruption

℞ Resin of pod phyllin 25 per cent in compound tincture of benzoin

Used in the treatment of venereal warts

Cryotherapy

Cryotherapy is the treatment of skin lesions by the application of intense cold using solid carbon dioxide ethyl chloride frigiderm or liquid nitrogen Warts, superficial hemangiomas, skin tags and *creeping eruptions are dermatoses which may be* treated by this method

Solid carbon dioxide may be procured in cake form or manufactured in the office by the use of the Kidde apparatus

Ethyl chloride is recommended as a freezing spray in the treatment of creeping eruption Because of its toxic effects it should not be used to freeze tissues of the face in dermabrasion techniques.

Frigiderm (Freon) is a relatively nontoxic freezing agent which is recommended for use in dermabrasion.

Liquid nitrogen is applied by a large cotton applicator to warts seborrheic keratoses, and skin tags.

Hypo-allergic cosmetics are manufactured by several companies and are available in ethical pharmacies and department stores.

Cotton gloves should be worn constantly by the patient with severe hand eczema When immer

sion in soapy water detergents, disinfectants or solvents is necessary the cotton gloves should be covered with rubber gloves. Fabric-lined rubber gloves may be irritating The cotton gloves should be washed with a bland soap and thoroughly rinsed with clear water

Specific Instructi n Sheet for Patient

Acne vulgaris.

1 The acne diet is not meant to be a reducing diet. It eliminates certain foods which are thought to affect acne patients adversely Weight may be regulated by increasing or decreasing such starchy food as bread, rice potatoes macaroni and spaghetti.

2. Do not squeeze or pick pimples. Permanent scarring may result from careless handling of such blemishes. Let your doctor treat any that may need ttention

3 Keep your bowel habit regular Get plenty of sleep and drink large quantities of water and milk

4 Wash face three times daily with warm water and soap. If medicated soap has not been prescribed use a bland toilet soap for this purpose

5 Use the lotion or cream prescribed. Do not use patent medicines

6 If your face becomes excessively dry notify your doctor

If home ultraviolet treatments are prescribed a bulb type source may be used (R-8 Lamp) The lamp should be placed 30 inches from the surface of the body The first exposure should not exceed 5 minutes, front and back and the exposures should be increased one minute each day t limit of 15 minutes. Treatment should be given every other day or twice weekly Goggles must be worn t protect the eyes Sunglasses do not gi sufficient protection.

8 If -ray treatments are being given use no local medication without specific instructions from your doctor X-ray treatment properly administered, does not cause scarring.

Pyodermas.

1 Your condition is contagious.

2 Do not go to school or work until lesions are healed

3. Scratching may spread the infection to other parts of your body

4 Keep your washcloth and towel separate These should be boiled after each use

5 Soak crusts off the lesions with a compress of warm boric acid solution.

6. Apply medication prescribed by your physician.

Physical Therapy

Radiotherapy The indications for radiotherapy in dermatology have diminished considerably since the advent of the antibiotics and corticosteroids, but the application of ionizing radiations remains an important part of dermatotherapy and is still the treatment of choice in some benign and malignant dermatoses.

Roentgen rays are generated in vacuum tubes when fast moving electrons are stopped suddenly by impingement against a target The speed of the electrons is regulated by the voltage which thus controls the penetrating power or quality of the x-rays produced The materials through which the rays must pass before reaching the surface of the body (filtration) also influences quality by absorbing a relatively high proportion of the softer less penetrating rays. Radiations generated at 100 peak kilovolts (KVP) or less are adequate for almost all dermatologic purposes

Intelligent selection of the quality of radiation appropriate for treatment of a given dermatosis depends on understanding of the nature and depth of the pathologic process It is desirable, perhaps essential, to use as soft a quality as is compatible with adequate treatment of the disease, in order to protect underlying organs and structures from unnecessary radiation. It must be remembered that the effect of ionizing radiations is always to *do damage* and that successful radiotherapy depends on production of adequate damage to a disease process without causing permanent or irreparable damage to normal tissues. This is especially important over such radiosensitive structures as the eye gonads, and bone-marrow

Superficial x-rays generated at 50 to 100 KVP are needed for relatively deep processes. In x ray epilation of the scalp for tinea capitis, an epilating dose must be delivered to the hair-bulbs at a

depth of almost 5 mm so that the use of too soft a quality would necessitate too high a surface dose The depth of the skin changes in psoriasis is usually not more than 1 mm so that in treating psoriasis of the scalp or scrotum one should use a quality of radiation which will be absorbed within the first few millimeters. For this and similar purposes much softer rays are used such as the ultra soft x rays generated in the 25-KV range and the Grenz rays, which are x-rays generated at about 8 to 15 KV

Thorium X a naturally occurring isotope of radium with a half life of 3 64 days, is useful in treating superficial dermatoses In its decay it produces a large percentage of energy as alpha rays and much smaller percentages as beta and gamma rays These alpha rays are absorbed within the first 80 to 90 μ of skin but some of the thorium X enters the hair follicles and sweat ducts, so that some effect is produced at depths of 1 to 2 mm It is generally accepted that the alpha rays account for the therapeutic effects of thorium X which resemble those of soft to medium Grenz rays The principles of radiologic safety must be observed in handling thorium X. It is used primarily to treat port wine nevi or small areas of neurodermatitis

Beta and gamma rays from radium and other sources, are used occasionally Beta rays are electrons which are absorbed superficially at depths depending on the initial energy of the particles and therefore on their source Within their range of penetration they evoke intense ionization Gamma rays are highly penetrating this power varying with the source They are usually used in dermatology at very short source-tissue distances since their intensity falls off rapidly in accordance with the inverse square law Radium is used to treat hemangiomas and carcinomas

There is evidence that ultraviolet rays may also be ionizing although they are absorbed almost entirely in the upper epidermis. The cumulative effects of sunlight on the skin such as farmer-sailor skin and keratoses result from repeated exposures to ultraviolet rays.

The safe use of radiotherapy of any quality or kind demands accurate control of dosage Every x ray or Grenz-ray machine must be calibrated individually by a radiation physicist preferably with the power source on which it is to be operated Calibration should ordinarily be repeated at yearly intervals X ray dosage is given in term of roentgen units and quality Dosage of beta and gamma radiation may be expressed in roentgen equivalents or in milligram or millicurie-hours whereas that of thorium X is expressed in microcuries per cubic centimeters and controlled by watching the effect on the disease process.

All ionizing radiations accelerate the aging process in the skin the degree depending on the quality and amount of the radiation The ultraviolet rays in sunlight are known to produce premature wrinkling telangiectasia and keratoses which can eventuate in squamous cell carcinoma High dosage of Grenz rays can cause superficial atrophy and telangiectasia but has not been reported to produce any of the more severe radiation sequelae Conventional x rays beta rays, and gamma rays in high dosage are capable of causing all of the effects mentioned plus sclerosis keratosis, ulcer and carcinoma These radiations cause pigmentation. The development of any of these undesirable reactions can be diminished considerably by fractionation using multiple small doses instead of a single massive dose

The following diseases require x rays in the 50 to 100 KVP range for effective radiotherapy tinea capitis some epithelioma tumors of granuloma fungoides, and cystic acne

Very soft radiations such as Grenz rays and thorium X, may be effective in psoriasis lichenified dermatitis, lichen planus hemangiomas, leukoplakia, seborrheic dermatitis, keratosis follicularis, superficial epitheliomatoses, intraepidermal carcinomas, superficial basal cell cancers and the premycotic stage of mycosis fungoides.

Gamma rays have been successfully used in the treatment of hemangiomas. Interstitial radium has been used in treating skin cancers.

Cathode rays, fast electrons generated in Van de Graaf and other particle accelerators have been used recently for the treatment of advanced stages of cutaneous lymphomas and for other derma

toses. This treatment shows great promise but it is still experimental.

Topical application of corticosteroids during and after high-dosage therapy of epitheliomas and other circumscribed lesions seems to reduce the inflammatory reaction significantly without blocking the radiotherapeutic effect.

Some other physical agents also play important roles in dermatologic therapy. *Damped high-frequency* oscillating current is used for the fulguration (external spark) or desiccation (interstitial) of warts, moles, keratoses, skin tags, and carcinomas. Electrolysis, the passage of a small direct current through the tissues so that sodium chloride is hydrolyzed and sodium hydroxide is formed at the negative electrode, may be employed to destroy small moles and superfluous hair. Intense cold may be applied with solid carbon dioxide (−79°C) or liquid nitrogen (−195°C) in the treatment of warts, moles, and hemangiomas.

Ultraviolet rays are of value as adjunctive therapy in psoriasis, alopecia areata, acne vulgaris, and occasionally in chronic eczemas. *Erythema* doses of ultraviolet benefit pityriasis rosea. This modality is contraindicated in exfoliative dermatitis, lupus erythematosus, acute eczemas, dermatitis venenata, and polymorphous light eruptions.

PART 2

Morphologic Dermatology

Introduction to Part 2

Some dermatoses which have been described as *specific diseases* are probably *morphologic entities* representing *reaction patterns*. The type of cutaneous response elicited by a stimulus cannot be predicted and varies in different persons (Chart 2). The reason for this variation in reaction pattern is unknown.

It is essential to obtain a good history, perform a thorough physical examination and, if possible, confirm the clinical diagnosis with laboratory findings. The history and the morphologic changes should indicate the necessary laboratory studies.

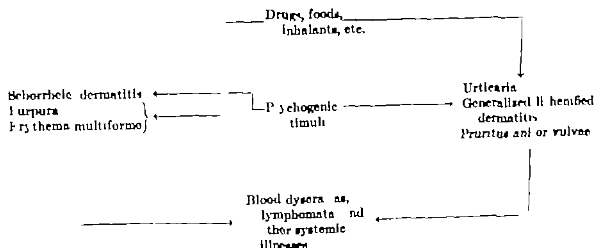
To make a morphologic diagnosis:

1. Examine the entire skin surface in a good light.
2. Search carefully *for a typical primary lesion* (macule, papule, vesicle, pustule).
3. Ask yourself the following questions:
   a. What secondary lesions are present (scales, crusts, fissures, scars, etc.)?
   b. What special configurations are present (annular, umbilicated, groups, etc.)?
   c. Are the lesions acute or chronic?
   d. Is the skin surface edematous or lichenified?
   e. Are the lesions sharply defined or ill-defined?
   f. Are lesions sessile or pedunculated?

After the examination is complete, look under the appropriate heading in the following sections and study the lists and the differential diagnosis charts. Confirm your diagnosis with the indicated diagnostic aids.

CHART 2

Precipitating Agents (Trigger Mechanism)



Chapter 12

REGIONAL INVOLVEMENT BY COMMON DERMATOSES

Anus and perianal areas. Atopic dermatitis, neurodermatitis folliculitis, condylomata lata condylomata acuminata, tinea cruris, contact dermatitis, furunculosis, pediculosis pubis, moniliasis.

Breasts. Contact dermatitis, tinea versicolor Paget's disease folliculitis, scabies, seborrheic dermatitis eczema

Chest and back. Seborrheic dermatitis acne vulgaris and acne conglobata, pustular folliculitis, tinea versicolor seborrheic keratoses, psoriasis, secondary syphilis, neurotic excoriations, pityriasis rosea miliaria rubra neurofibromatosis, herpes zoster dermatitis herpetiformis, keratosis follicularis pediculosis vestimentorum, urticaria.

Ears Seborrheic dermatitis, neurodermatitis infectious eczematoid dermatitis, chondrodermatitis nodularis chronica helicis, contact dermatitis epitheliomas, pernio sarcoid, gout

Eyelids Contact dermatitis, xanthelasma, hordeolum, eczema, seborrheic dermatitis epithelioma molluscum contagiosum, milia.

Face Acne vulgaris, rosacea, milia, lupus erythematosus, epithelioma, seborrheic dermatitis, seborrheic keratoses, erythema multiforme, lupus vulgaris sarcoid, nevi, angiomas herpes simplex, herpes zoster secondary syphilis, molluscum contagiosum chloasma, vitiligo, freckles

Extremities. Dermatitis eczemata, ecthyma, urticaria, psoriasis lichen planus erythema multiforme erythema nodosum, ichthyosis keratosis pilaris, purpura, stasis dermatitis atopic eczema, scabies verruca vulgaris

Genitalia Syphilis (chancre condylomata lata, mucous patches) chancroid lymphogranuloma venereum, granuloma inguinale condylomata acuminata, balanitis, lichen planus carcinomas, dermatitis venenata, kraurosis vulvae moniliasis neurodermatitis scabies herpes progenitalis tinea cruris.

Hands and feet. Contact dermatitis, epidermophytosis, epidermophytid, vitiligo, scabies hyperhidrosis dyshidrosis erythema multiforme eczema, syphilis, dermatitis repens, verruca, paronychia.

Lips and mouth Herpes simplex, aphthous stomatitis, leukoplakia carcinoma, lingua nigra, chancre mucous patches perlèche Fordyce's disease, urticaria retention cyst lupus erythematosus, transitory benign plaques avitaminosis, lichen planus.

Neck Lichen simplex chronicus, neurodermatitis, seborrheic dermatitis, dermatitis venenata papilloma colli, acne keloid.

Nails Moniliasis leukonychia, onychia, onychomycosis, paronychia, psoriasis, syphilis, arsenic congenital absence of nails, spoon nails.

Scalp Alopecia (areata senile traumatic idiopathic premature) seborrheic dermatitis keratoses, scleroderma, dermatitis venenata, psoriasis, tinea capitis lupus erythematosus pediculosis capitis, verruca, nevi, sebaceous cyst, folliculitis

Trunk. Dermatitis venenata, pityriasis rosea seborrheic dermatitis, atopic dermatitis, lichen planus, urticaria, herpes zoster syphilis, pediculosis, exanthemata fungus infections

Chapter 13

DIFFERENTIAL DIAGNOSIS CHARTS

ANNULAR LESIONS—MACULES

Disease	Sites	Secondary lesions	Special characteristics	Etiology	Diagnostic tests
Pityriasis rosea	Trunk and extremities. Rarely on the face	Collarette of scale which peels toward the margin	Lesions fall in lines of cleavage. Herald patch frequently present. May form papules	Unknown	None
Tinea circinata	Trunk, face, extremities	Dry scale. Elevated crusted margin. Vesicles may be present in the margin	May form concentric ring	Fungi	Examination of scrapings and culture
Erythema multiforme	Palms and soles. May be generalized	None	Iris or target lesions	Drug sensitivity, foci of infection. May be seasonal	Biopsy
Seborrheic dermatitis	Scalp, face, interscapular area, presternal region, genitocrural area	Oily yellowish scale	May form festooned lesions on forehead	Unknown	Biopsy
Purpura annularis telangiectodes	Lower extremities	None	Purpuric lesion. Persistent brown pigmentation follows involution of lesions	Unknown	*Biopsy*

ANNULAR LESIONS—PAPULES

Disease	Sites	Secondary lesions	Special characteristics	Etiology	Diagnostic tests
Secondary syphilis	On the face particularly about the nose and mouth	Slight scale at margin	Color is brownish red. Each margin is composed of small segments	*Spirochaeta pallida*	Dark field serologic test for syphilis, etc.
Erythema multiforme	Palms, soles, and generalized	None	Target lesions. Macules and vesicles may also be present	Drug sensitivity, foci of infection and seasonal variation	Biopsy
Lichen planus	Flexor surfaces of forearms, genitalia, mouth	Adherent, scant scale	Forms lines, groups of lesions. Umbilicated lesion, and reticulated leukoplakia	Unknown. Associated with emotional tension	Biopsy
Urticaria	Generalized	None	Lesions may form pseudopodia and are transitory	Sensitivity reaction or psychogenic stimuli	Intradermal scratch or passive transfer test
Granuloma annulare	Usually over bony prominences	None	Lesions may involute after segment is removed for biopsy	Unknown	Biopsy
Sarcoid	About the nose or mouth, hands and elsewhere	Lesions may ulcerate	Frequently associated lesions in bones of fingers, and in lungs	Unknown	Biopsy
Psoriasis	Scalp, elbows, knees, trunk. Rarely on face	Profuse silvery scale	Linear groups may occur. Bleeding points follow removal of scale	Unknown	Biopsy
Pityriasis rosea	Trunk and extremities. Rarely on face	Collarette of scale which peels toward the margin	Lesions fall in lines of cleavage. Herald patch frequently present	Unknown	None

ANNULAR LESIONS—VESICLES

Disease	Sites	Secondary lesions	Special characteristics	Etiology	Diagnostic tests
Erythema multiforme	Mouth, genitalia, trunk	None	Macules and papules may also be present. Relapses frequent. Potentially serious	May be caused by drug sensitivity, foci of infection, or may be seasonal	Biopsy
Pemphigus vulgaris	Mouth, trunk, genitalia	Crusts, erosions	Nikolsky sign present. Patient seriously ill	Unknown	Biopsy
Dermatitis herpetiformis	Trunk and extremities	Excoriations and blood crusts. Hyperpigmentation	May form groups of vesicles. Small papules may be present	Unknown	Biopsy
Impetigo contagiosa	Face and other areas	Blood and pus crust	No scar or hyperpigmentation on involution	Staphylococcus or streptococcus	Culture

LINEAR GROUPS

Disease	Primary lesion	Sites	Secondary lesions	Subjective symptoms	Etiology	Diagnostic tests
P o iasi	Papule When scales are removed it is a maculo	Elbows knees trunk scalp Rarely on face	Profuse sil very white scale When removed bleeding points are present Forms an nular lesions	None or mod erate itching	Unkno n	Biopsy
Li n plan	Papule May form annu lar and um bilicated lesion	Flexor sur faces of forearms genitalia mouth trunk	Scant adherent dry scale	Mild to intense itching	Unknown Emotional tension is associated	Biopsy
Verruca plana j enili	Flesh-colored or light brown papule	Most com monly on the face May occur on extremi ties	None	None	Virus	Biopsy
Lich n nitid	Papule	Genitalia face and extremities	None	None	Unknown	B opsy
Dermatiti en nata	Vesicle	Exposed ur faces	Blood cru t serous crusts and secondary pyogenic in fection with pu crust	Intense itch ing	Contact sen i t vity	Patch tests
Li b n triat	Papule	Usually on the extremities n a contin uou u broken line	Blood cru ts	Mild itching	Unknown	Biopsy
Nev ni lateri	Papule Flesh c lored o brown	Face trunk o e trem ties	None	None	Congenital	B opsy

GROUPED VESICLES

Disease	Sites	Type of grouping	Subjective symptoms	Etiology	Diagnostic tests
Herpes zoster	Unilateral following nerve distribution	Round or oval groups of deep tense vesicles on inflamed edematous base	Not recurrent. Itching or pain. May have severe postherpetic pain	The same virus which causes varicella	Tissue culture
Herpes simplex	One or more groups, most commonly occur on lips or genitalia	Round or irregular groups of flaccid superficial vesicles. Frequently covered by serous crust	Recurrent in same site frequently. Itching	Virus	Tissue culture
Dermatitis venenata	On surfaces exposed to sensitizer	Linear groups of vesicles on edematous base	Moderate to severe itching	Contact sensitivity	Patch test
Dermatitis herpetiformis	Trunk and extremities	Annular lesions and ringed groups. Postinflammatory melanin deposit	Intense itching	Unknown	Biopsy; potassium iodide patch test
Pemphigus vulgaris	Mucous membranes, face, trunk and extremities	Annular lesions. Flaccid vesicles which rupture easily. Nikolsky sign	Malaise. Difficulty in swallowing if mucous membranes are involved	Unknown	Biopsy
Lymphangioma circumscriptum	On any part of body	Round or irregular groups of lymph vesicles covered with hyperkeratosis	None	Congenital	Biopsy

UMBILICATED LESIONS

Disease	Sites	Primary lesion	Special characteristics	Etiology	Diagnostic tests
Molluscum contagiosum	On any part of body	A pearly globular papule	The molluscum body may be pressed from the lesion	Virus	Biopsy
Lichen planus	Flexor surfaces of forearms, groin, also buccal mucosa	A violaceous flat-topped papule	Linear groups and annular lesions formed	Unknown. Emotional tension is associated	Biopsy
Varicella	Generalized	Vesicle then pustule	Not true umbilication because it is not formed until the vesicle breaks	Virus	Self-limited disease. Tissue culture
Variola	Generalized	Macule then papule then vesicle and finally short pustule	Patient violently ill	Virus	Tissue culture
Parapsoriasis Mucha Habermann	Generalized	Papules, macules and vesicles all occurring at same time	Chronic condition. Self-limited	Unknown	Biopsy
Kaposi's varicelliform eruption	Generalized	Vesicles and vesicopustules	Occurs only in atopic individuals	Herpes simplex virus	Tissue culture

EXCORIATED LESIONS

Condition	Sites of predilection	Primary lesion	Secondary lesions	Special morphologic features	Specific laboratory or other diagnostic tests
Dermatiti l rpeti *formi*	Trunk	Vesicles and papules	Excoriations blood cru t hyperpigmentation	*Grouped vesicles* annular lesion arciform lesions	Biopsy Potassium iodide patch test
Dermatiti ven nata	Exposed part of body	Vesicles	Excoriations blood cru ts serou crusts secondary pyogenic infection	Linear groups of vesicles on in flamed edematous base	Patch tests
Hodgkin li ease	Generalized	Lichenified macular eruption	Blood crusted ex coriati ns	Generalized lymphadenopathy Herpetic eruptions may *develop*	Biopsy of skin and lymph nodes Blood picture
Le kemia uti	Localized or generalized	Lichenified plaques nod ules or tumors	Blood crusted excoriations	May resemble neurodermatitis	Biopsy of skin Sternal marrow studies Blood picture
N uroti c co riation	Any area within easy reach of the hands	None	Deep blood cru ted excoria ti ns	Pink or white scars may be present in add tion to new les ns	Psychi tric ex amination
Pedic losi apiti (I ead lice)	Scalp forehead and back of neck	None	Excoriati ns cov ered with serou blood and pus cru ts	Ova attached to scalp hair by chitin Live parasites may be found	Microscopic ex aminatio of ova attached to hair
I edi ulosi pubi (p bi lice crab lice)	Pul ic area lower abdomen but tocks eyelashes and axillae	None	Blood-cru ted ex coriations and pu -cru ted le sions	Parasites are at tached to skin and resemble *freckles* in the pubic area Brownish ova attached to hairs	Microscopic ex amination of ova att hed to hair
Pedi losi corpori (body lice cooties)	Tl e trunk	None	Blood-cru ted ex coriati ns Furuncles an l pus-crusted le si	Parasites present *in seam of the* clothing	*Microscopic ex amination of* parasites
Scal les	Between f ngers palm wri t buttocks male genit l a Not n face	Vesicle	Blood serous and pu crust	Dotted lin in ves le (burrow)	Microscopic tudy of vesicle *contents f r* *Acarus scab e*
Pap la ti caria	Face trunk and extremit es	Papules and papulovesicles	Blood ru ts scars secondary pyo derma	Some les n m ha *e central* pu t res	Clinical appear ce
Atopi eczema	Face tru k fle ures	Maculo papule or vesi le	Scales crust fi sures l chenifica tion secondary pyogenic infec tion	History of at py	None
Jaundice	General zed	Icteric tint to kin nd sclerae	Linear blood cru ted e cori tio	Systemi illness	Li e fu tio tudies

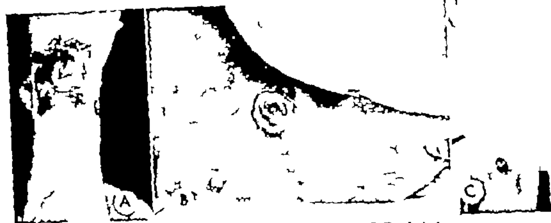


Fig. 24 A Stasis ulcer B Sickle cell anemia ulcer C Tropical ulcer

Condition	Sites	Morphologic features	Special laboratory or other diagnostic measures
Blastomycosis	Face hands feet et	Granulomatous ulcer which slowly spread peripherally numerous small pustules in margi of ulcer	Biopsy Culture on blood agar Direct microscopic examination of exudat
Bromoderma	Legs	Granulomatous ulcer resembling blastomycosis	Biopsy Rule out blastomycosis by direct examination and culture Blood bromide
Chancroid	Genitalia	Papule or vesicopustule hich becomes superficial irregular soft ulcer with granular base covered ith pus Inguinal lymph nodes are enlarged (bubo)	Culture on defibrinated rabbit's blood It test
Thermal burn (third degree)	(A) part of bod	Well defined ulcer covered ith adherent crust hich eventually separates, leaving a red, granulomatous base	History
Fros bi	Ears nose fingers nd toes	Erythema edema, blebs and gangrene The resulting ul cers are superficial or deep	History of exposure
Roentgen dermati is advanced)	On the rradiated area	The ulcer superficial and is surrounded by one of atrophy nd telangiectases	Biopsy
E hyma	Legs buttock vulva et	One or more ell defined ulcers covered with pus crust and surrounded by zones of erythema Heal by scar formation	Culture
Epithelioma (basal cell)	Face and ears	Begins as small papule or nodule Grow slowly and spreads peripherally The ulcer i usually shallow and dry and is surrounded by pearl rolled margin	Biopsy
Epi helioma squamous cell	Face lip hands etc	Resembles basal cell type but grow more rapidly Superficial or deep ulcer ith granulomatous irregula fungoid central portion hich bleeds freely on light trauma	Biopsy

ULCERS—continued

Condition	Sites	Morphologic features	Specific laboratory or other diagnostic measures
Factitious ulcers (self inflicted)	On areas accessible to hands	Single or multiple sharply defined regular or irregular *asymmetric superficial or* deep ulcers Old lesions heal and new ones constantly appear	History psychiatric examination
Granuloma inguinale	Genito-crural area and perineum	Papule which ulcerates and spreads peripherally The ulcer has a granulomatous base and a raised rolled margin *Marked destruction of skin* and subcutaneous tissue	Microscopic examination of Wright or Giemsa stained smear of marginal tissue for Donovan bodies
Perforating ulcer of foot (malum perforans)	Plantar surfaces over first or fifth metatarsophalangeal joints	Lesion begins as callus like thickening resembling a plantar wart Eventually the callus covers a deep ulcer which may extend to the bone	Serologic test for syphilis spinal fluid examination blood picture neurologic examination blood sugar
Sickle-cell anemia ulcer	Lateral aspect of distal *third of leg*	Round or oval punched out ulcer *with indurated slightly* raised edges and a profuse purulent discharge	Blood studies
Stasis ulcer	Lower third of legs near the ankles	One or more irregular superficial or deep ulcers with profuse seropurulent discharge Usually surrounded by a zone of stasis eczema	*Clinical appearance*
Syphilis (chancre)	*Genitalia lips nipples, etc*	A *single hard indurated* ulcer with scant discharge Satellite lymph nodes are enlarged, hard and painless	Dark field serologic test for syphilis
Syphilis (ecthymatous)	Trunk scalp and extremities	*Large round flat* pustules with reddish brown areola A thick crust forms over the resulting ulcer	*Serologic test for syphilis* dark field examinations
Syphilis (gumma)	*Legs forehead scalp etc*	Begins as rounded subcutaneous nodule or tumor which develops central necrosis, *sloughs and forms a deep ul*cer with precipitous sides (punched out)	Serologic test for syphilis
Tuberculosis cutis lupus	Face and neck	A round or oval well defined shallow or deep ulcer which bleeds easily Nodules are present in the margin	*Biopsy*
Tuberculosis cutis indurativa	Legs principally on the calves	Begins as deep-seated slowly growing nodules which ulcerate The ulcers are superficial or deep with little discharge	Biopsy

ALOPECIAS

Condition	Sites of predilection	Characteristic lesion	Other lesions or conditions present	Specific laboratory or other diagnostic aids
Alopecia area	Scalp, beard or may be generalized	Well defined, non-inflamed areas of complete baldness	None associated with this condition	Biopsy
Male pattern alopecia	Scalp of males	Diminution in quantity or absence of hair in parietal area and on crown	None associated with this condition	Physical appearance
Symptomatic or functional alopecia	Scalp of females	Diffuse diminution in quantity of hair	Tension. Hormonal imbalance	None
Secondary syphilis	Scalp	Patchy incomplete areas of alopecia. Moth-eaten appearance	Other lesions of secondary syphilis	Dark field examination of moist lesion; serologic test for syphilis
Folliculitis decalvans	Scalp	Scarred areas of alopecia scattered throughout the scalp	Follicular pustules and papules in the scalp	Biopsy
Pseudopelade	Scalp	Atrophic scarred area of alopecia throughout the scalp	None	Biopsy
Lupus erythematosus	Scalp, face and ears	Atrophic scarred area of baldness. Follicular plugging and marginal erythema present	Lesion of lupus erythematosus on face, ears, nose and elsewhere	Biopsy; lupus erythematosus cell study
Seborrheic dermatitis	Scalp, face, presternal area, and between the scapulae	Areas of partial alopecia, covered with oily adherent scale. Festooning of lesions on forehead, and behind the ears. Annular lesions present	Lesions of seborrheic dermatitis on chest, back and in pubic area	Biopsy
Tinea capitis	Scalp	Most common in young children. Areas of incomplete alopecia filled with stubble of broken-off hair. Adherent dry scale	None usually, although other ringworm lesions may be present	Wood light examination, direct microscopic examination, culture on Sabouraud's medium
Trichotillomania	Scalp	Areas of incomplete alopecia with remaining hairs of varying length	Other evidence of emotional trait; onychophagia (nail biting)	None
Favus	Scalp, nails and other areas	Yellowish cup-shaped crust (scutula). Areas of scarred alopecia. "Mousy" odor	Nails are thick, friable and lusterless. Scutula may be present on extremities and trunk	Direct microscopic examination of scales or hair. Culture on Sabouraud's medium

Chapter 14

LISTS OF CONDITIONS

Conditions in Which Scale Formation is a Prominent Feature

Macular

Exfoliative dermatitis
Eczema
Ichthyosis
Pellagra
Pityriasis alba
Pityriasis rosea
Pityriasis rubra pilaris
Post-inflammatory exfoliation
Rubeola (post-inflammatory)
Scarlatina (post-inflammatory)
Seborrheic dermatitis
Superficial fungus infections

Papular

Keratosis pilaris
Lichen planus
Secondary syphiloderms
Superficial epitheliomatosis

Macular or Papular

Eczema
Parapsoriasis
Pityriasis rosea
Psoriasis

Hyperpigmentation or Deposits of Foreign Pigment in the Skin

Addison's disease
Argyria
Atabrine dermatitis
Bismuth pigmentation
Café-au-lait spots of neurofibromatosis
Carotenemia
Chloasma
Chrysoderma (gold)
Freckles
Hemosiderosis
Jaundice
Melanosis of Riehl
Mongolian blue spots
Postinflammatory deposit of melanin diffuse or localized
Tattooing accidental and intentional

Atrophic Changes

Anetoderma (macular atrophy)
Atrophic lichen planus
Balanitis xerotica obliterans
Congenital hemiatrophy
Kraurosis vulvae
Lichen sclerosus et atrophicus
Morphea (localized scleroderma)
Necrobiosis lipoidica diabeticorum
Poikiloderma vasculare atrophicans
Scleroderma
Senile cutaneous atrophy
Subcutaneous fat necrosis

Atrophic Scars (Scars Formed without Preceding Ulceration)

Atrophia striae
Favus
Folliculitis decalvans
Lupus erythematosus
Lupus vulgaris
Parapsoriasis varioliformis
Pseudopelade
Radiodermatitis (with telangiectasia)

Common Non-scaling Conditions

Adenoma sebaceum
Angiomas
Chloasma
Epithelioma
Erythema multiforme
Erythema nodosum
Freckles
Granuloma annulare
Gummas
Keloid
Leprosy
Lupus vulgaris
Macular syphilid
Pseudoxanthoma elasticum
Purpura
Sarcoid
Scleroderma
Toxic erythema
Tuberculides
Urticaria
Xanthomas

Eruptions Which Rarely Involve the Face

- Dermatitis herpetiformis
- Lichen planus
- Parapsoriasis
- Pityriasis rosea
- Psoriasis
- Scabies
- Tinea versicolor

Some Systemic Diseases in Which Cutaneous Eruptions Are a Prominent Feature

- Addison's disease
- Anthrax
- Avitaminoses
- Blood dyscrasias
- Brucellosis
- Chancroid
- Chemical poisoning
- Deep mycoses
- Dermatomyositis
- Diphtheria
- Endocrine dysfunctions
- Eosinophilic granuloma
- Epiloia
- Erysipelas
- Gout
- Hemochromatosis
- Infectious exanthemata
- Infectious mononucleosis
- Leprosy
- Leptospirosis
- Lupus erythematosus
- Lymphomas
- Lymphogranuloma venereum
- Meningococcemia
- Moniliasis
- Pemphigus vulgaris
- Rheumatic fever
- Rickettsial diseases
- Rocky Mountain spotted fever
- Sarcoid
- Scleroderma
- Syphilis
- Thromboangiitis obliterans
- Tuberculosis
- Tularemia
- Typhus
- Ulcerative colitis
- Variola
- Visceral malignancies
- Xanthomatosis
- Yaws

Chapter 15

Macular Eruptions

Acrodynia

Synonym Pink disease

Sites of predilection Hands and feet of infants and children

Objective symptoms The hands and feet are markedly edematous and there is diffuse erythema in this rare condition Cyanosis of the distal portions of the extremities together with generalized hyperhidrosis, indicates sympathetic nervous system activity Secondary pyogenic infection frequently develops on the extremities. Profuse miliaria rubra may develop on the trunk

Subjective symptoms Severe pain itching and fever The child is irritable and unable to sleep for more than a few minutes at a time The general health deteriorates

Etiology The condition may be the result of mercury ingestion Some observers believe acrodynia to be a vitamin B complex deficiency or an infectious process.

Histopathology Not diagnostic

Diagnostic aids History and physical examination

Relation to systemic disease The condition may be an indication of an infectious process, or a vitamin deficiency

Differential diagnosis Raynaud s disease dermatitis venenata

Therapy Adequate diet with vitamin B complex supplements topical antibiotic ointments to correct secondary pyogenic infection systemic antibiotic therapy when indicated

Addison s Disease

Synonym None

Sites of predilection The cutaneous lesions may be generalized

Objective symptoms This systemic disease may be brought to the physician s attention primarily because of the pigmentary changes. The earliest lesions may be marked depigmentation or hyperpigmentation Eventually the skin develops a bronze color caused by the deposit of melanin in the basal layer of the epidermis The pigmentary changes are most marked over the face groins axillae areolae and genitalia



Fig 23 Addison disease

Subjective symptoms The cutaneous lesions are asymptomatic The systemic symptoms are characterized by general lassitude anorexia and general malaise

Histopathology There is a marked increase in the deposit of melanin in the basal layer The histopathologic picture is not specific

Diagnostic aids History and physical examination hemogram blood electrolytes steroid excretion studies

Etiology. Suprarenal insufficiency.

Relation to systemic disease. Addison's disease is systemic.

Differential diagnosis. Chloasma.

Therapy. Desoxycorticosterone acetate pellet implantation, systemic fludrocortisone, supportive measures.

Albinism

Synonym. Albino.

Sites of predilection. Generalized.

Objective symptoms. The skin of the entire body is depigmented. The hair is white, yellowish, or has a reddish tint. The absence of melanin in the choroid causes the eyes to look pink, produces photophobia and, at times, nystagmus. The skin is hypersensitive to light. Albino skin in the young adult is *frequently the site of* keratoses, epitheliomas and other degenerative changes.

Subjective symptoms. Photophobia.

Etiology. Congenital.

Histopathology. Not diagnostic. Absence of melanin in the basal layer.

Diagnostic aids. History and physical examination.

Relation to systemic disease. These patients are frequently mentally retarded, deaf, or have other congenital defect.

Differential diagnosis. Clinical appearance is characteristic.

Therapy. Avoidance of exposure to sunlight. Judicious use of sun screen agents.

Argyria

Synonym. Silver poisoning.

Sites of predilection. Generalized.

Objective symptoms. The entire integument is involved with a diffuse or localized, slate-blue permanent hyperpigmentation. This same type of pigmentation may be observed in the lunulae of the nails, the sclerae and the mucous membranes.

Subjective symptoms. None.

Etiology. Ingested silver salt or continued application of silver colloidal suspensions to the nasal mucosa or pharynx.

Histopathology. Numerous very fine refractile granules are found in the membrana propria of the sweat glands, the elastic tissue fibers, and nerve bundles. These fine granules are seen best with the dark field microscope.

Diagnostic aids. Biopsy, history and clinical appearance.

Relation to systemic disease. The underlying pathologic state which was treated with silver compounds.

Differential diagnosis. Chloasma, post inflammatory pigmentation.

Therapy. None effective.

Atrophia Senilis

Synonym. Senile atrophy.

Sites of predilection. Generalized. The most characteristic changes are seen on the exposed portions such as the face, neck, and hands.

Objective symptoms. The skin is dry and irregularly depigmented, with brownish macules, fine bran-like scale, telangiectasia, and loss of elasticity. Senile keratoses are commonly present on the face and hands.

Subjective symptoms. Itching, poor tolerance to soap and water.

Etiology. Senescence.

Histopathology. Atrophy of the skin appendages and the subcutaneous tissue. Senile elastosis develops in the corium and the elastic tissue takes the bluish color of the hematoxylin eosin stain.

Diagnostic aids. Biopsy, clinical appearance.

Relation to systemic disease. Other manifestations of advancing age.

Differential diagnosis. Eczematous eruptions.

Therapy. Avoidance of exposure to wind and sun. Use of lubricant creams on the skin. Avoidance of the use of soap.

Carotenosis

Synonym. Carotenemia.

Sites of predilection. Generalized.

Objective symptoms. This condition most commonly occurs in infants and young children. The condition is very prominent on the palms and soles. The sclerae are not involved.

Subjective symptoms. No cutaneous subjective symptoms.

Etiology. Excessive intake of foods (e.g., orange juice and carrots) containing large amounts of carotene.

Histopathology Nonspecific

Diagnostic aids History relative to systemic disease clinical appearance

Relation to systemic disease Carotene is normally converted into vitamin A. In myxedema and diabetes the conversion is impaired and carotene accumulates in the skin

Differential diagnosis Jaundice

Therapy Reduce the intake of carotene (normally found in carrots oranges squash, pumpkin sweet potato and eggs)

Chloasma

Synonym Liver spots.

Sites of predilection Face genitalia and areolae of breasts.

Objective symptoms Variously sized well defined non scaly light to dark brown macules These lesions vary in size from 2 to 4 cm or larger There is no evidence of any previously existing active inflammatory process Intensification of normal pigment on genitalia or areolae of breasts

Subjective symptoms Emotional distress produced by the cosmetic defect

Etiology Unknown

Histopathology Increase in the melanin content of the basal layer

Diagnostic aids Biopsy findings are not specific

Relation to systemic disease The condition may indicate the presence of an ovarian tumor It frequently results from some hormone dysfunction and occasionally develops during pregnancy It is frequently idiopathic.

Differential diagnosis Post inflammatory hyperpigmentation post radiation hyperpigmentation argyria Addison s disease

Therapy Avoidance of exposure to sunlight The use of hydroquinone creams is of doubtful value

Comedo

Synonym Blackheads

Sites of predilection Face ears, back and chest

Objective symptoms Small black or gray plugs in follicular orifices. These plugs may be readily expressed and are whitish and caseous, with black ends. The plugs consist of condensed sebum and epidermal debris. The black portion of the plug is not caused by dirt but by a chemical change in the cellular elements. Many comedones become acne papules and pustules. Large comedones resembling neoplasms develop in the elderly

Subjective symptoms The psychogenic effect produced by the presence of lesions.

Etiology Specific causative factors are unknown.

Histopathology Keratin plug in the pilosebaceous orifice with dilatation of the gland by sebaceous material.

Diagnostic aids Demonstration of the sebaceous plugs by expression biopsy

Relation to systemic disease The condition is common at puberty and is related to hormone activity dietary indiscretions, and bacterial infection.

Differential diagnosis Clinical appearance is characteristic

Therapy Expression of comedones. Dietary restrictions colloidal sulfur lotions ultraviolet (See specific instructions under acne in the chapter on Papular Eruptions.

Cutis Hyperelastica

Synonym. Ehlers Danlos syndrome

Sites of predilection Generalized

Objective symptoms The skin is soft and smooth without evidence of any active inflammatory process. The skin is hyperelastic and a fold may be stretched far beyond its normal attachment. When the fold is released it returns to its normal appearance Associated with this condition there is hyperextensibility of joints, particularly of the fingers and toes. Following trauma pseudotumors develop particularly over the elbows and knees. These tumors are extravasations of blood and serum which collect in the traumatized areas because of ruptured blood vessels. This type of lesion involutes spontaneously and is replaced by a scar They are recurrent

Subjective symptoms None

Etiology Congenital

Histopathology Some fragmentation of elastic fibers may be demonstrated by the use of special stains The histopathologic picture is not specific.



FIG 26 Cutis hyperelastica. Facial lesion and hyperextensibility of joint

Diagnostic aids. History and clinical findings.
Relation to systemic disease None
Differential diagnosis. Cutis laxa anetoderma.
Therapy None

Dermatitis Exfoliativa Neonatorum

Synonym. Ritter's disease pemphigus neonatorum impetigo neonatorum.
Sites of predilection. Generalized.
Objective symptoms. The primary lesion may begin as an erythematous macule or bleb which spreads to involve the entire body. Vesicles, vesicopustules and bullae develop and spread. Pus rapidly develops in the bullae and vesicles. Exfoliation occurs in large plaques. Fissure formation develops at the angles of the mouth. Blood, serum and pus crusts form in areas where vesicles and blebs have ruptured. The child may have stomatitis, rhinitis and corneal ulcers and may become cachectic.
Subjective symptoms. Chills, fever and loss of appetite. This is a serious illness which may terminate in death.
Etiology. *Micrococcus pyogenes.*
Histopathology Edema of the epidermis. Vascular dilatation is present in the papillary portion of the corium and there is a cellular infiltrate composed of polymorphonuclear leukocytes and lymphocytes.
Diagnostic aids. Culture of the exudate. disc or tube dilution sensitivity tests on the bacteria to determine antibiotic selection.
Relation to systemic disease This condition may precede the onset of bacteremia, and may terminate in death.
Differential diagnosis. Leiner's disease, scarlatina, ichthyosis, eczema, epidermolysis bullosa.
Therapy These children should be hospitalized and isolated. Cultures should be made from the exudate to determine the antibiotic of choice for systemic administration. The involved areas should be compressed with warm boric acid solution or warm normal saline solution to remove the detritus and exudate. Following the use of compresses a bland antibiotic ointment should be applied. The antibiotic of choice should be administered systemically. Avoid soap on the involved areas until the eruption has completely cleared.

Dermatitis Factitia

Synonym. Feigned eruption, malingerer's disease, dug-out disease, delusions of parasitosis



FIG 27 Neurotic excoriations

Sites of predilection Any area on the body which can be reached by the hands.

Objective symptoms Objective symptoms vary with the type of irritant which has been used If a substance such as phenol a mineral acid or a caustic has been applied to the skin the lesion may be edematous and reddish surrounded by a zone of darker erythema and scale or serous crusting Various stages in the evolution of lesions, varying from acute to chronic may be present All the lesions are well defined and too geometrically perfect to be natural in origin Areas of erythema vesiculation necrosis and ulceration occur

In many patients there are well healed scars healing lesions covered with adherent crusts, and recently produced lesions covered with blood crusts These represent areas in which the patient has picked out pieces of skin with the fingernails or some sharp instrument

Subjective symptoms Those produced by the mental aberration of the patient Some patients will complain of a crawling sensation under the skin (formication) Another common complaint is that of a parasite which is on or burrowing under the skin Patients state that the itching is so intense that they must dig out the parasite

Etiology Mental illness Malingerers may intentionally injure the skin in order to obtain compensation or gain sympathy

Histopathology The microscopic picture is not diagnostic

Diagnostic aids If the traumatized area or areas are covered with occlusive dressings containing some bland therapeutically inactive substance such as sterile petrolatum the *lesions will heal* When the dressings are removed the patient will reproduce the lesions in the same site

Relation to systemic disease The condition is an indication of mental illness

Differential diagnosis Syphilis tuberculosis occupational diseases allergic eruptions drug eruptions.

Therapy Psychotherapy

Dermatomyositis

Synonym None

Sites of predilection The cutaneous lesions are most *commonly seen on the face* (*especially* about the eyelids) the trunk, and extremities.

Objective symptoms In the early stage the eruption *is polymorphic* beginning with recurrent edema of the face and extremities. The first lesions appear on the eyelids and then extend *over the cheeks, face neck and shoulders.* Small scaly bluish red macules develop over the bony prominences and the skin becomes *pigmented and atrophic In some patients the* lesions resemble those of systemic lupus erythematosus. Later cutaneous manifestations re*semble urticaria erythema multiforme* erythema nodosum eczema or erysipelas.

The patient has a low grade intermittent fever *and sweating is a common symptom The char*acteristic feature of this condition is the development of nonsuppurative myositis which *leads to progressive weakness.* In advanced cases walking is impossible and the head droops when the patient is lifted Mild forms of the *condition may become chronic or show complete* remission There is definite tenderness of muscles

Subjective symptoms Cutaneous symptoms vary from mild itching to severe pain over the involved areas. There is marked pain and tender*ness in the muscles.* In advanced cases the head droops and the patient has difficulty in raising himself to a sitting position He has weakness of all muscle groups especially those about the eyes.

Etiology The cause is unknown however this condition as well as lupus erythematosus and scleroderma has been associated with the collagen vascular group of diseases

Histopathology The histopathologic picture of skin lesions is nonspecific. A muscle biopsy shows perivascular infiltration with lymphocytes, *plasma cells,* and polymorphonuclear leukocytes. The muscle fibers become edematous, undergo degenerative changes finally become *homogeneous* and are replaced by fibrosis.

Diagnostic aids Muscle biopsy

Relation to systemic disease Splenomegaly The heart *may* be involved and death from heart failure ensue Involvement of the diaphragm

and intercostal muscles may lead to bronchopneumonia or suffocation

Differential diagnosis Scleroderma lupus erythematosus erythema multiforme erythema nodosum poikiloderma

Therapy Nonspecific Corticosteroids may give symptomatic relief

ECZEMA

The word eczema is a morphologic not a specific diagnostic term. Eczema may be atopic seborrheic or contact The condition may be *acute subacute or chronic (neurodermatitis)* The development of an eczematous eruption is associated with one or more of the following factors an allergic state focal infection, psychogenic factors or chronic local irritation. Regardless of the causative factor the basic clinical picture is that of an ill defined, confluent, acutely or chronically inflamed eruption in which there is serous exudation, scaling, excoriations, and fissure formation The clinical appearance varies with the age of the individual the site of involvement the causative factors, and the duration of the eruption.

Eczema Atopic Dermatitis (in Children)

Synonym. Tetter seven-year itch.

Sites of predilection Face scalp antecubital fossae popliteal spaces trunk, and the genitocrural area.

Objective symptoms Ill-defined pink to red confluent macular eruption. The surface may be covered with a variable amount of dry scale and the lesions are slightly thickened Excoriation and blood crusts are frequently present and at times the involved area is moist or covered with a serous crust Complication with secondary pyogenic infection may be extensive. Superimposed *Candida albicans* infection may occur With the development of chronicity there is marked accentuation of the normal skin markings (lichenification) caused by thickening of the skin *Because of loss of tone fissures develop* especially on the dorsal surfaces of the hands and fingers.

Subjective symptoms. Severe itching.

Etiology Hypersensitivity to ingested, injected, or inhaled substances. In chronic cases there may be broadening of the allergic base so that the patient becomes sensitized to many substances Patients with atopic dermatitis frequently develop superimposed contact dermatitis caused by overzealous local therapy Lesions are aggravated by emotional stimuli.

Histopathology The microscopic picture varies with the stage of the eruption. To a greater or less degree there is edema of the epidermis and the upper cutis but no frank vesiculation. There is some vascular dilatation and round cell infiltration Moderate acanthosis may be present.



Fig 28 A Atopic eczema B Atopic eczema complicated by pyogenic infection

Diagnostic aids. History and physical examination patch scratch and intradermal tests are of doubtful value.

Relation to systemic disease These patients frequently have or develop urticaria hay fever or asthma

Differential diagnosis Fungus infections contact dermatitis pityriasis rosea psoriasis It is frequently difficult to distinguish between atopic eczema and seborrheic dermatitis

Therapy General principles. Allergic eczematous eruptions in infants may be caused by exogenous or endogenous sensitizing substances emotional stimuli or a combination of two or more of these factors. Endogenous stimuli include foods drugs vaccines and inhalants. Exogenous stimuli include a wide variety of sensitizing substances such as baby oils powders, disinfectant soaps mattress covers, rubber pants, plastic pants, toys, and various topical medications. In any chronic eczematous eruption physical discomfort produces emotional stimuli which in turn aggravate the previously existing dermatitis

Specific treatment measures depend on detection and elimination of causative factors If the eczematous eruption is persistent there is a broadening of the allergic base which in turn makes the therapeutic problem more difficult Selection of the treatment method depends on the type of eruption observed at the time of examination

General management

1 The child should be placed on a routine of treatment prescribed by the physician and carried out by *one designated person*

2 Avoid the use of soap or soap substitutes on the involved areas The child may be cleansed with clear water The use of any cleansing agent on acutely inflamed skin other than clear water may cause great irritation *In the absence of secondary pyogenic infection* the child with eczematous eruptions may be bathed in oatmeal water starch baths, Aveeno baths or soybean meal baths.

3 Avoid the use of rubber or plastic pants. These should be worn only when the child is in transit and removed on arrival

4 Place a cotton quilted pad between the sheet and the mattress cover of the child's crib This is done to protect the child from coming in contact with the plastic mattress cover

5 The room should be light and well ventilated. Dusting should be done with a vacuum cleaner or with a damp cloth The child should be removed from the room at this time

6 The diapers should be washed thoroughly in hot water with a white nonperfumed soap and then boiled They should be rinsed three times in clear hot water to remove all traces of soap and thoroughly dried before use

7 Following the bowel movement the child should be cleansed with a pledget of cotton moistened with mineral oil

8 If a dusting powder is desired, cornstarch may be used This may be placed in a white cotton sock tied at the top The cotton sock stuffed with cornstarch may be sterilized by placing it in the oven for 15 minutes at baking temperature The cotton sock containing the cornstarch is used as a powder puff Do not use medicated talcs.

Secondary infection complicating eczema in infants

1 Compress the involved areas with warm saturated solution of boric acid to remove the crusts and other surface detritus. The boric acid solution is made at home by dissolving one teaspoonful of boric acid in a pint of hot water This should be put in a bottle and labeled. Some parents prefer to make a *fresh boric acid solution at the time of* each treatment Following the application of the boric acid compresses the infected areas should be treated with a thin application of Spectrocin Neosporin Terramycin, or Aureomycin ointments. Do not massage the ointment into the area This procedure should be repeated three times daily until all secondary infection has completely disappeared

2 A combination ointment containing a steroid with an antibiotic will serve to eradicate the secondary pyogenic infection and will also relieve the inflammatory process. Terra-Cortril ointment Neo-Cortef ointment Cortisporin ointment Neo-Magnacort ointment and Meti Derm with neomy

en are among the available efficient commercial preparations. These preparations are expensive and the patient should be advised to apply only a thin film to the involved area.

3. If the eczematous process is located in the crural region, it may be complicated by monilial infection. In such instances use alternating applications of Mycostatin ointment and one of the steroid ointments (or Mycolog ointment)

Systemic medications.

1 In infants and very young children adequate sedation is important The child may be treated with Seconal or Nembutal suppositories (1/8 gr in each suppository) inserted at bedtime. In older children, elixir of phenobarbital given in teaspoonful doses (each containing 1/4 gr) given several times daily is satisfactory

2 Antihistamines are primarily of value as sedatives. Elixir of Pyribenzamine elixir of Benadryl, and syrup of Theruhistin are among the available commercial preparation for systemic administration. Do not use antihistamine ointments for local therapy as they are sensitizers and may produce local allergic reactions.

3 Avoid the use of systemic steroids in infants and young children. It is seldom necessary to use such potent medication in the treatment of this relatively benign process. Unless the child becomes extremely ill because of the eczematous process, systemic steroid therapy is contraindicated

4 Syrup of Temaril is a compound recently made commercially available It is primarily of value in the relief of pruritus. Each teaspoonful contains 2 5 mg of the active ingredient It should be given after meals and at bedtime This preparation also has some sedative effect

5 Advise the parent to avoid the use of home remedies without professional medical advice

Treatment of subacute and chronic lesions.

1 Avoid the use of such sensitizing substances as ethyl aminobenzoate ointment benzocaine ointment, and Surfacaine ointment

2 One to 3 per cent crude coal tar in petrolatum or Lassar paste is frequently an effective preparation Liquor carbonis detergens (solution of coal tar) used in a concentration of 3 to 5 per cent in a vanishing cream base or lotion is also an effective preparation. The commercially available coal tar distillate ointments are efficient and have the advantage of being stainless.

3 The various commercially available steroid ointments or lotions produce relief from itching and also decrease the existing erythema These preparations are the most efficient of all local medications for the treatment of cutaneous eczematous eruptions. Combinations with neomycin and other antibiotics are available for the treatment of those lesions in which there is secondary pyogenic infection. Because of the expense involved, patients should be warned to apply the ointments sparingly to the involved areas

4 A lotion made of equal parts of fresh, refined linseed oil and lime water (carron oil) is soothing and emollient

5 Avoid the use of drying lotions. Calamine liniment is superior to calamine lotion in the treatment of most patients with eczematous eruptions.

Dietary restrictions.

1 If the history indicates that the eruption began following the intake of a certain food, it should be eliminated from the diet for two weeks. If there is improvement it should be readministered to see if symptoms are reproduced

2. There is no hard and fast rule to govern the elimination of any group or groups of foods Skin tests are notoriously unreliable as a guide

3 A diet diary may be of value The patient's mother is requested to write down each article of food the child eats and how it is prepared. This must be done meal by meal and day by day Twice each day the patient's general condition should be recorded. At the end of each week the events relative to the child are to be summarized and a search made for some common factor in the diet.

Environment.

1 The child should be placed in a clean well lighted, and well ventilated room.

2. The bed should be changed frequently The child should not be allowed to wear a wet or dirty diaper

3 A minimum of handling of the infant is essential. As much as possible treatment routines should be carried out by one designated person.

4 Hospitalization is advised in those instances where the child is acutely ill or the treatment routines cannot be satisfactorily performed at home.

Eczema, Atopic Dermatitis, Neurodermatitis (In Adults)

Synonym Seven year itch, tetter.

Sites of predilection Popliteal spaces, antecubital fossae, axillae, face, trunk, genitocrural area and perianal area.

Objective symptoms The condition may become apparent at any age. In adults the lesions are ill defined confluent lichenified macules. There is marked accentuation of the normal skin lines in the involved areas with a tendency to localization. The surface may be scantily scaly but is more frequently covered by excoriations and blood crusts. Secondary pyogenic infection may be present.

The color varies from dull pink to violaceous. A widespread chronic eruption is referred to as disseminated neurodermatitis. A single lichenified area may be present on the back of the neck, in the antecubital fossae, in the popliteal spaces, or on the inner aspect of one or both thighs. At times the accentuation of the lines (lichenification) is so extensive that small papules are formed at the margin of the lesion. This type of involvement has been called localized neurodermatitis, lichen simplex chronicus or neurodermite.

Subjective symptoms Moderate to intense itching, emotional instability and sleeplessness.

Etiology Hypersensitivity to ingested, injected, or inhaled substances, chronic contact sensitivity, emotional tension.

Histopathology Acanthosis and hyperkeratosis with edema of the basal layer and the upper cutis. There is mild chronic cellular infiltration.

Diagnostic aids Biopsy may be of value, history and physical examination.

Relation to systemic disease The condition may be associated with respiratory allergic phenomena, emotional instability, or foci of infection.

Differential diagnosis Granuloma fungoides, fungus infections, psoriasis, seborrheic dermatitis.

Therapy

1 Patient should have a thorough physical examination with search for foci of infection.

2 Intelligent use of sedatives or tranquilizers is a useful adjunct in the management of these patients.

3 Avoid overtreatment.

4 Avoid the use of soap or soap substitutes on the involved areas. Oatmeal baths, starch baths, Aveeno baths, or soybean baths are of value as emollients.

5 If secondary pyogenic infection is present the areas should be compressed with warm boric



FIG 29 (*Left*) Eczema of nipple and areola. Diagnosis confirmed by biopsy. (*Right*) Chronic lichenified eczema (neurodermatitis).

acid solution to remove crusts and other surface detritus and, following this, use one of the antibiotic ointments such as Spectrocin, Neosporin, Terramycin or Aureomycin. Avoid unnecessary rubbing in the application of these ointments.

6. A steroid-antibiotic ointment (Terra-Cortril, Neo-Cortef, Cortisporin, or Neo-Magnacort) is efficient in eradicating superficial pyogenic infection and reducing the erythema.

7. Avoid the use of systemic steroids except in extensive involvement.

8. In chronic lesions, 1 to 3 per cent crude coal tar or solution of coal tar in petrolatum or Lassar's paste is frequently an effective preparation. The commercially available coal tar distillate ointment are efficient and stainless.

9. The commercially available steroid ointment (hydrocortisone, prednisolone, Medrol, Magnacort and triamcinolone acetonide) are all efficient but are expensive.

10. One per cent phenol crystal in olive oil or cotton seed oil is an effective antipruritic preparation. Menthol (0.1 to 0.5 per cent) in alcohol, vanishing cream or lotion base is also an efficient antipruritic preparation.

Ephelides

Synonym. Freckles.

Sites of predilection. The face, forearms, shoulders, back, and chest.

Objective symptoms. Variously sized, discrete, well defined, brownish macules which range in size from 1 mm. to 1 cm. in diameter. The number of lesions and the depth of pigmentation is greater in the summer months.

Subjective symptoms. None.

Etiology. The action of sunlight on the exposed surfaces is productive of a deposit of melanin in the skin. This condition may also be produced by roentgen rays.

Histopathology. An increased deposit of melanin in the basal layer of the epidermis.

Diagnostic aid. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. Xeroderma pigmentosum, urticaria pigmentosa, tinea versicolor, café-au-lait spot.

Therapy. None.

Epithelioma Intraepithelial

Synonym. Paget's disease, erythroplasia of Queyrat, Bowen's disease.

Sites of predilection. Paget's disease occurs in the areola and the nipple area of the breast; erythroplasia of Queyrat occurs on the glans penis; Bowen's disease occurs on the trunk and extremities.

Objective symptoms.

PAGET'S DISEASE. Occurs primarily in females between the ages of 40 and 60 although males may also develop these lesions. This condition is usually a well defined, scaly, reddish, macular lesion involving the areola and nipple. The margin is usually slightly raised, although this may be obscured by serous exudation and crust formation. The lesion does not respond to local therapy and never heals spontaneously. It is usually unilateral.

ERYTHROPLASIA OF QUEYRAT. This lesion, which is usually limited to the glans penis, is primarily a scaly, erythematous macule which is sharply defined and covered with a slight amount of adherent dry scale. Occasionally there is some serous exudation and crust formation. This lesion is not self-limited and does not respond to local therapy.

BOWEN'S DISEASE. The primary lesion is a light brown, pinkish, or reddish maculopapule which is covered with a thickened horny layer. The margin is sharply defined. The lesions may be covered with a serous crust. When the scale or crust is removed the underlying surface is reddish and may be moist. The base is granular and occasionally papillomatous in appearance.

EXTRAMAMMARY PAGET'S DISEASE. These lesions which resemble erythroplasia occur on the lips, vulva, penis, trunk, nose and extremities.

Subjective symptoms. In the early phases of the disease, itching is a prominent symptom.

Etiology. Unknown.

Histopathology.

PAGET'S DISEASE. Epidermal cells and large, sharply defined, mononucleated cancer cells possessing deeply staining nuclei and faintly staining cytoplasm are present. Paget cells oc

cur intraepidermally singly and in small groups. These cells do not have prickles.

BOWEN'S DISEASE The histologic picture is that of the classical intraepithelial epithelioma Dyskeratotic cells are present in the epidermis. Extensive individual cell keratinization is present

ERYTHROPLASIA OF QUEYRAT The histologic picture is that of an intraepithelial epithelioma with characteristic dyskerototic cells.

Diagnostic aids Biopsy findings are characteristic.

Relation to systemic disease It is generally believed that Paget's disease is carcinoma at the onset In advanced cases prognosis is poor Both Bowen's disease and erythroplasia of Queyrat are intraepithelial epitheliomas which eventually become squamous cell carcinomas

Differential diagnosis Infectious eczematoid dermatitis neurodermatitis contact dermatitis.

Therapy For Paget's disease of the breast surgical excision followed by deep radiation is the method of choice Bowen's disease and erythroplasia of Queyrat will respond to treatment with Grenz ray or conventional x ray Desiccation may be used to treat both Bowen's disease and erythroplasia of Queyrat

Epitheliomatosis Superficial Basal Cell

Synonym Eczematous epitheliomata erythematoid epithelioma

Sites of predilection Extremities and trunk.

Objective symptoms The lesions may be few or numerous They are well defined confluent and discrete flat macules. Occasionally the lesions may be slightly elevated There is a moderate amount of adherent dry scale Lesions spread peripherally and vary in size from 1 to 10 cm in diameter Each lesion is limited by a slightly raised very thin shiny rolled margin Excoriations and crusting are frequently present The condition develops most commonly after the third decade

Subjective symptoms Moderate to intense itching

Etiology Unknown

Histopathology Characteristic of basal cell epithelioma with the tumor tissue closely applied to the under surface of the epidermis.

Diagnostic aids Biopsy

Relation to systemic disease None demonstrated. May be associated with inorganic arsenic intoxication.

Differential diagnosis Lupus erythematosus eczema psoriasis mycotic infection neurodermatitis.

Therapy The small lesions may be excised or desiccated All lesions respond to low voltage roentgen ray treatment (Grenz ray treatment) Many dermatologists believe this is the method of choice

Erysipela

Synonym St Anthony's fire

Sites of predilection Face but may appear anywhere on the body

Objective symptoms The condition begins as one or more bright red raised macules which extend peripherally to form a well defined, edematous shiny flat lesion Superficial vesicles usually develop on the surface of the lesion There is marked increase in local heat and the area may become hemorrhagic The patients are usually acutely ill The temperature may reach 104 to 105 F There is enlargement of regional lymph nodes and the lymph vessels may be palpable Some patients have recurrent attacks of erysipelas. With succeeding attacks persistent swelling of the involved parts may develop

Subjective symptoms Malaise chill and fever and vomiting Locally there is usually burning, itching and pain

Etiology Streptococcus pyogenes

Histopathology There is superficial cellulitis in which the blood and lymph vessels are dilated and there is a marked perivascular infiltrate consisting primarily of intact polymorphonuclear leukocytes.

Diagnostic aids Culture on blood agar

Relation to systemic disease Erysipelas is a systemic disease which may be followed by acute glomerular nephritis. Chronic otitis media has also been reported as a sequela

Differential diagnosis Acute contact dermatitis

Therapy Penicillin is usually the antibiotic of choice in the treatment of this condition If this infection develops on a surgical or maternity

ward the patient should be isolated Local therapy is of no value

Erysipeloid

Synonym. None

Sites of predilection. The hands.

Objective symptoms The lesions develop at the site of trauma in people who handle crabs, oysters, and other seafood The primary lesion is a macule and presents a dull red or purplish appearance. The lesions are slightly elevated and edematous and show a tendency to peripheral spread. Vesicles may develop. The border is sharply defined. The patients are not usually febrile.

Subjective symptom Burning and itching.

Etiology *Erysipelothrix rhusiopathiae*

Histopathology A superficial cellulitis with vascular dilatation and an infiltrate of polymorphonuclear leukocytes closely packed about the vessels.

Diagnostic aids Culture history of handling sea food biopsy

Relation to systemic disease In diffuse generalized cases the patients may develop septicemia and occasionally endocarditis Severe and prolonged arthritis is a common sequela.

Differential diagnosis. Erysipelas and other pyodermas

Therapy Penicillin by injection, sulfonamides, and broad spectrum antibiotics.

Erythema Ab Igne

Synonym Toasted shins.

Sites of predilection Extensor surfaces of the legs

Objective symptoms. The lesions begin as a reticulated, pinkish macular eruption, which later develops a brownish color

Subjective symptoms None

Etiology The condition develops because of exposure of the legs to open fireplaces, ovens or oil stoves The reticulated pattern develops because of local hemostasis. The condition may also develop from exposure to infrared lamps or constant application of hot water bags or electric pads

Histopathology No specific picture

Diagnostic aids History of exposure clinical appearance

Relation to systemic disease No specific relationship

Differential diagnosis Cutis marmorata livedo reticularis.

Therapy None

Erythema Multiforme

Synonym. None

Sites of predilection. Hands and forearms face and lips, trunk.

Objective symptoms. The lesions are variously sized and variously shaped, well defined, flat macules or slightly raised, flat lesions. They may vary in size from 5 mm. to 20 cm in diameter The individual lesions are pink, reddish, or violaceous in color and there is absence of scale The characteristic lesion consists of concentric rings of different colors and a central small vesicle This is known as an iris or target lesion Annular lesions may develop and several lesions come together to form a confluent or gyrate lesion Papules and vesicles may also form part of the clinical picture In some patients all three types of lesions may be present (see erythema multiforme in the chapters on Papular Eruptions and Vesicular Eruptions)

Subjective symptoms. The condition is characterized by recurrences In some individuals there is mild to moderate itching Arthralgia may be a symptom Generalized malaise may develop

Etiology The specific etiologic agent is unknown. The clinical syndrome has been produced by sensitization to penicillin, antipyrine, and other drugs. There is a possible relationship to foci of infection. The cases originally described by Hebra recurred on a seasonal basis.

Histopathology The collagen is edematous and there is vascular dilatation in the papillary portion of the corium. The perivascular cellular infiltrate consists of lymphocytes and polymorphonuclear leukocytes.

Diagnostic aids. Clinical examination and history biopsy picture is nonspecific.

Relation to systemic disease The condition may be associated with splenomegaly foci of infection, allergic disturbances, or rheumatic fever Ery

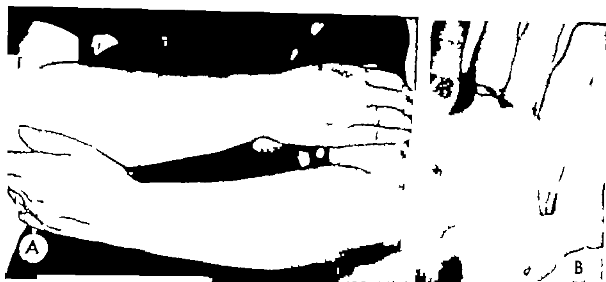


FIG 30 A Erythema multiforme due to penicillin B Characteristic iris target lesions in erythema multiforme

thema marginatum commonly observed in rheumatic fever is a variant of erythema multiforme Other systemic infectious diseases may produce the same cutaneous picture

Differential diagnosis Urticaria macular syphilid lichen planus id eruptions

Therapy In severe cases systemic steroid therapy is justified These patients should also be at bed rest Foci of infection should be eliminated If the causative factor is drug allergy the patient should be warned not to take the same drug again

Erythema Pernio

Synonym Chilblains

Sites of predilection Distal portions of the extremities, the ears and the nose

Objective symptoms Ill defined erythematous macules which become infiltrated, and eventually vary in color from dark pink to violaceous Accompanying these symptoms there may be a reticulated reddish eruption on the arms and legs. The skin surface feels cool and is somewhat edematous

Subjective symptoms Vary in degree from numbness tingling itching or burning to intense pain. At times there is loss of sensation

Etiology The condition is common in cold damp climates and occurs as a result of repeated exposure to cold It most commonly develops in individuals who have a circulatory defect referred to as chilblain circulation

Histopathology There is vascular dilatation in the upper portion of the cutis with round cell infiltration Moderate acanthosis and hyperkeratosis is present

Diagnostic aids. Clinical appearance supported by history and biopsy

Relation to systemic disease Peripheral vascular disease

Differential diagnosis Raynaud s disease.

Therapy None effective

Erythema Scarlatiniforme

Synonym None.

Sites of predilection Generalized

Objective symptoms The onset of this condition is acute with the development of a profuse macular eruption consisting of numerous discrete and confluent areas. The lesions spread rapidly until the entire body is involved, presenting the ultimate picture of a bright red confluent occasionally mottled eruption. There is vascular injection of the pharynx

After the erythema reaches a peak exfoliation begins in the form of large thin translucent sheets. This may begin while the erythema is still spreading and continue for a week or longer On the scalp and in the eyebrows and beard, the scales are fine abundant and adherent

Glove-like exfoliation of the palms and soles may occur

The condition is recurrent

Subjective symptoms. The onset is marked by chills and fever Temperature rarely exceeds 101°F Generalized malaise and nausea may occur Slight to moderate itching accompanies exfoliation.

Etiology The condition is probably toxic in origin and has been associated with foci of infection, drug reactions, and food sensitivities.

Histopathology No specific picture.

Diagnostic aids. Clinical appearance and history

Relation to systemic disease No specific relationship

Differential diagnosis. Scarlet fever

Therapy Avoid the use of soap on the involved area starch or oatmeal bath several times daily 1 per cent phenol crystal in oil to relieve the itching.

Erythema Solare

Synonym Sunburn

Sites of predilection The exposed parts.

Objective symptoms Large bright red, well defined, macular lesions The configuration of the lesion is determined by the clothing worn The intensity of the color varies with the severity of the exposure The surface may be covered with numerous small vesicles When the acute erythema subsides exfoliation occurs. Because of local medication or trauma the lesion may become eczematized

Subjective symptoms Pain When exfoliation begins itching occurs

Etiology Direct action of the actinic rays of the sun The reaction to exposure varies with the pigmentation of the skin. Brunettes have less of a tendency to develop sunburn

Histopathology Acanthosis and edema of the epidermis with hyperkeratosis There is vascular dilatation and perivascular cellular infiltration in the papillary portion of the cutis.

Diagnostic aid Clinical appearance and history

Relation to systemic disease In extensive cases secondary pyogenic infection may develop Acute nephritis may complicate extensive sunburn

Differential diagnosis. Toxic erythema pellagra.

Therapy In mild cases calamine lotion will relieve the itching.

One per cent hydrocortisone lotion or ointment is an effective remedy The use of prophylactic measures such as sun screen creams is advised in light-sensitive individuals.

Erythema Toxic

Synonym Erythema simplex

Sites of predilection. Trunk face and extremities.

Objective symptoms The onset is acute with the development of numerous, variously sized and variously shaped pink to reddish macules which blanch on pressure. The lesions are ill defined lack infiltration and are not scaly

Subjective symptoms Usually none.

Etiology The condition may be the result of emotional tension food or drug sensitivity or a febrile reaction.

Histopathology No specific picture

Diagnostic aids None of specific value

Relation to systemic disease May be a cutaneous manifestation of food or drug intoxication

Differential diagnosis. Scarlatina macular syphilid.

Therapy Elimination of the causative factor

Erythrasma

Synonym None.

Sites of predilection The axillae and the genitocrural region.

Objective symptoms Well defined, confluent macular lesions with round or serpiginous borders. The areas are reddish brown and slightly infiltrated The surface of the lesion is covered with a fine furfuraceous scale.

Subjective symptoms Moderate to mild itching.

Etiology *Nocardia minutissimus* a fungus.

Histopathology Mycelial threads may be demonstrated in the stratum corneum with the Hotchkiss-McManus stain

Diagnostic aids. *Nocardia minutissimus* has not been successfully cultured. The thin branching hyphae and spores may be demonstrated in a potassium hydroxide preparation or by the ink potassium hydroxide stain The lesions develop a characteristic bright red fluorescence on exposure to Wood light

Relation to systemic disease No relationship to any specific disease

Differential diagnosis Tinea cruris tinea versicolor seborrheic dermatitis intertrigo

Therapy Five per cent sulfur salicylic acid ointment one per cent selenium sulfide ointment saturated solution of sodium hyposulfite applied several times daily

Erythroderma Desquamativa

Synonym Leiner's disease seborrheic dermatitis of infancy

Sites of predilection Generalized

Objective symptoms This condition which occurs in infants may begin on the scalp as a profuse scaling macular eruption with an erythematous base The lesions extend over the face on to the neck ears, trunk extremities and genital area Because of maceration in the folds of the neck and in the groins there may be some serous exudation and monilial infection may be superimposed The clinical picture is that of extensive seborrheic dermatitis

Subjective symptoms Usually mild from the cutaneous standpoint

Etiology Unknown The condition may be the result of some dietary idiosyncrasy The character of the lesion is frequently altered by overzealous topical therapy The clinical picture may be altered so that the differential diagnosis between atopic eczema and seborrheic dermatitis is impossible

Histopathology The microscopic picture is non specific

Diagnostic aids None of any specific value

Relation to systemic disease The children are usually poorly nourished The prognosis is good with proper care This condition responds to adequate diet and intelligent local therapy

Differential diagnosis Ritter's disease eczema scarlatina

Therapy Avoid the use of soap on the involved areas Remove plastics from contact with the child Place a cotton quilted pad between the sheet and the plastic or rubber mattress cover of the child's crib apply alternating applications of sulfur salicylic acid (2.5 per cent) ointment and one of the steroid ointments to the areas, each twice daily use Mycostatin ointment to the areas in which monilial infection is superimposed place the child on a nourishing diet

Fat Necrosis In The Newborn

Synonym Adiponecrosis neonatorum.

Sites of predilection Trunk and buttocks.

Objective symptoms The eruption begins at birth or within the first two weeks of life as one or more non tender indurated areas which vary in size from 2 to 10 cm and are scattered over the back and buttocks. The lesions may be pinkish or red in the early phase of the disease but the erythema usually fades. Although the lesions appear to be slightly elevated the skin surface is smooth. The lesions do not pit on pressure have well defined borders, and depressed central portions Lesions will occur on any part of the body where there is fat The condition lasts for about two months, then gradually subsides. There are no sequelae

Subjective symptoms None

Etiology Unknown possibly some defect in fat metabolism

Histopathology There is fat necrosis with the development of needle-like crystals of fat The infiltrate consists primarily of epithelioid and giant cells (some of which are filled with fat crystals)

Diagnostic aids. Biopsy history and physical examination



Fig 31 Subcutaneous fat necrosis Lesion bottocks and lower trunk of newborn child

Relation to systemic disease The general health usually remains good.

Differential diagnosis Scleroma sclerededema scleroderma edema neonatorum.

Therapy None effective

Fixed Eruption

Synonym Fixed drug eruption.

Sites of predilection May appear on any part of the body

Objective symptoms The primary lesion is a hyperpigmented macule which varies from light to dark brown and varies in size and shape One or more of these lesions may be present In the active phase the lesions are erythematous and edematous Occasionally vesicles develop When the active lesion subsides areas of hyperpigmentation remain If the substance originally responsible for producing the eruption is readministered systemically the pigmented areas will again become active and assume the original inflammatory symptom During the acute inflammatory phase the lesions may resemble erythema multiforme The pigmented areas, which form the inactive phase are usually persistent

Subjective symptoms. During the active inflammatory stage the symptoms vary from moderate to severe itching, but there are no symptoms during the inactive or pigmented stage

Etiology This type of allergic reaction is produced by the systemic administration of phenolphthalein, antipyrine and other drugs

Histopathology The histopathologic picture is not diagnostic.

Diagnostic aids. A careful history may reveal the drug responsible for producing the condition. To prove the diagnosis administer a small quantity of the offending substance during the inactive phase and observe the patient carefully during the next three hours for the redevelopment of erythema, vesiculation or other objective symptoms.

Relation to systemic disease This is a specific allergic reaction. The appearance of these lesions may indicate the habitual use of cathartics coal tar antipyretics or other drugs

Differential diagnosis Erythema multiforme eczema chronic contact dermatitis.

Therapy Discontinue use of the offending substance



F 33 Fixed drug eruption

Granuloma Fungoides

Synonym. Mycosis fungoides

Sites of predilection. Generalized.

Objective symptoms This peculiar hematopoietic neoplastic disease begins in the skin. The cutaneous manifestations are divided into (1) phase of dermatitis, (2) phase of infiltration, (3) the tumor stage and (4) the ulcerative phase

In the first stage there are few to numerous, localized areas which may be discrete or confluent ill defined or partially defined round or oval, and either dry or moist In this phase the condition may mimic parapsoriasis a *plaque* poikiloderma atrophicans vasculare mild radiodermatitis, eczema, psoriasis or lichenified dermatitis. In the presence of a chronic skin eruption which does not respond to treatment the possibility of granuloma fungoides should be considered.

During the second stage circumscribed area



FIG 33 Examples of granuloma fungoides

of lichenified dermatitis develop The lesions range in size from 1 cm to 10 cm in diameter and may be intermingled with plaque-like lesions described in the first stage Scaling lesions resembling those of psoriasis may be present Annular and gyrate lesions may develop

The tumor phase gradually develops following the stage of infiltration The growths vary in size and shape and usually arise from lichenified plaques These lesions seldom cause any subjective symptoms and they may disappear spontaneously Occasionally tumors arise in an area of skin not previously involved by the process.

During the ulcerative phase the tumors or infiltrated lesions break down eventually developing granulomatous mushroom like masses.

Subjective symptoms Itching during the first and second phases. During the tumor phase and the stage of ulceration the lesions may be painful

Etiology Unknown

Histopathology The well defined cellular infiltrate in the upper layers of the cutis is polymorphous and is localized in the papillary portion. Mycosis fungoides cells are present There is acanthosis of the rete with inter and intracellular edema Micro abscesses (Pautrier) form in the epidermis.

Diagnostic aids Biopsy complete blood picture sternal marrow puncture

Relation to systemic disease This condition is a lymphoma Subsequent to the development of tumors in the skin other organs in the body may be involved The prognosis is poor and death may be anticipated in from 5 to 10 years.

Differential diagnosis Disseminated neurodermatitis leprosy eczema psoriasis urticaria.

Therapy The cutaneous lesions frequently respond to conventional x ray or Grenz ray therapy Nitrogen mustard is of value in some cases. Intravenous administration of antimony compounds is reputed to be of some value Systemic steroid therapy benefits some patients.

Hereditary Telangiectasia

Synonym. Osler's disease Osler Rendu disease

Site of predilection Skin and mucous membranes.

Objective symptoms. There are reddish or purplish small telangiectases on the lips, tongue and buccal mucosa. There are small groups of dilated blood vessels and small bright red angiomas over the face trunk, and extremities. Hematuria, bleeding from the mucous membranes of the mouth, or rectal hemorrhages may be associated symptoms.

Subjective symptom The cutaneous lesions are asymptomatic Malaise and weakness may develop if bleeding is profuse

Etiology Heredity

Histopathology There are telangiectases in the cutis with a diminution in elastic tissue

Diagnostic aids. History and physical examination blood picture biopsy

Relation to systemic disease Angioma and telangiectases may also develop in internal organs. Bleeding from the nose or other mucous membranes may be the initial symptom. Cutaneous lesions do not usually appear before puberty

Differential diagnosis. Hematoma nevus araneus senile angioma

Therapy None effective Transfusions may be necessary if bleeding is profuse Vitamin K may be of value



Fig 34 Hereditary telangiectasia

Ichthyosis

Synonym Fishskin disease sauriasis xeroderma xerosis congenital hyperkeratosis.

Sites of predilection Trunk and extremities.

Objective symptoms The condition may be apparent at birth or develop shortly thereafter If the child is born in the spring or summer the lesions may not be apparent until the cool months of the year The condition is confined to the skin and is more evident on the extensor surfaces of the extremities During warm weather lesions will almost completely disappear in the vast majority of the patients, but become obvious as soon as cool weather returns. The skin surface in the affected area is dry and harsh. It is covered with a profuse adherent dry scale which is frequently irregularly quadrilateral The condition may exist in a latent state

The development of small hyperkeratotic follicular papules known as keratosis pilaris is frequently associated with ichthyosis.

Occasionally the condition is so advanced at birth that death occurs immediately or soon thereafter This is known as harlequin fetus. In such patients the skin lacks elasticity and large fissures are present on the trunk and at the commissures.



Fig 35 Ichthyosis



FIG 33 Examples of granuloma fungoides

of lichenified dermatitis develop The lesions range in size from 1 cm to 10 cm in diameter and may be intermingled with plaque-like lesions described in the first stage Scaling lesions resembling those of psoriasis may be present Annular and gyrate lesions may develop

The tumor phase gradually develops following the stage of infiltration The growth vary in size and shape and usually arise from lichenified plaques These lesions seldom cause any subjective symptoms and they may disappear spontaneously Occasionally tumors arise in an area of skin not previously involved by the process

During the ulcerative phase the tumors or infiltrated lesions break down eventually developing granulomatous mushroom like masses

Subjective symptoms Itching during the first and second phases During the tumor phase and the stage of ulceration the lesions may be painful

Etiology Unknown

Histopathology The well defined cellular infiltrate in the upper layers of the cutis is polymorphous and is localized in the papillary portion Mycosis fungoides cells are present. There is acanthosis of the rete with inter and intracellular edema Micro abscesses (Pautrier) form in the epidermis.

Diagnostic aids Biopsy complete blood picture sternal marrow puncture

Relation to systemic disease This condition is a lymphoma Subsequent to the development of tumors in the skin other organs in the body may be involved The prognosis is poor and death may be anticipated in from 5 to 10 years.

Differential diagnosis Disseminated neurodermatitis leprosy eczema psoriasis urticaria

Therapy The cutaneous lesions frequently respond to conventional x ray or Grenz ray therapy Nitrogen mustard is of value in some cases. Intravenous administration of antimony compounds is reputed to be of some value Systemic steroid therapy benefits some patients.

Hereditary Telangiectasia

Synonym Osler's disease Osler Rendu disease

Sites of predilection Skin and mucous membranes.

Objective symptoms. There are reddish or purplish, small telangiectases on the lips, tongue and buccal mucosa There are small groups of dilated blood vessels and small, bright red angiomas over the face trunk, and extremities Hematuria bleeding from the mucous membranes of the mouth, or rectal hemorrhages may be associated symptoms

Subjective symptoms. The cutaneous lesions are asymptomatic Malaise and weakness may develop if bleeding is profuse

Etiology Heredity

Histopathology There are telangiectases in the cutis with a diminution in elastic tissue

Diagnostic aids History and physical examination blood picture biopsy

Relation to systemic disease Angiomas and telangiectases may also develop in internal organs. Bleeding from the nose or other mucous membranes may be the initial symptom. Cutaneous lesions do not usually appear before puberty

Differential diagnosis Rosacea nevus araneus senile angioma.

Therapy None effective Transfusions may be necessary if bleeding is profuse Vitamin K may be of value



Fig. 34 Hereditary telangiectasia

Ichthyosis

Synonym Fish-skin disease sauriasis xeroderma xerosis congenital hyperkeratosis

Sites of predilection Trunk and extremities

Objective symptoms The condition may be apparent at birth or develop shortly thereafter If the child is born in the spring or summer the lesions may not be apparent until the cool months of the year The condition is confined to the skin, and is more evident on the extensor surfaces of the extremities During warm weather lesions will almost completely disappear in the vast majority of the patients but become obvious as soon as cool weather returns. The skin surface in the affected area is dry and harsh It is covered with a profuse adherent dry scale which is frequently irregularly quadrilateral. The condition may exist in a latent state

The development of small hyperkeratotic follicular papules known as keratosis pilaris is frequently associated with ichthyosis

Occasionally the condition is so advanced at birth that death occurs immediately or soon thereafter This is known as *harlequin fetus.* In such patients the skin lacks elasticity and large fissures are present on the trunk and at the commissures.



Fig. 35 Ichthyosis

Subjective symptoms These patients are irritated by soap and have intense pruritus following the bath Excessive dryness caused by the extent of the lesions may also cause pruritus.

Etiology Congenital Familial characteristic

Histopathology Hyperkeratosis acanthosis and irregular dermal papillae without any evidence of inflammatory reaction

Diagnostic aids History and physical examination

Relation to systemic disease The general health of these patients is usually not affected

Differential diagnosis Eczema

Therapy Two per cent salicylic acid in petrolatum may be applied as a gentle inunction during the cool months of the year Other lubricants may be used Avoid the use of soap on the involved areas except when absolutely necessary All bathing should be done in a shower rinsing thoroughly Vitamin A in doses of 50 000 units three times daily is reported to be of value Therapy is supportive and not curative

Ichthyosiform Erythroderma Congenital

Synonym None

Sites of predilection Generalized but more prominent over the flexures.

Objective symptoms The condition is present at birth or develops a few days later This macular eruption usually begins as a generalized erythema which may be mild or severe Associated is a thickening of the horny layer which may precede the erythema or develop later in the course of the condition As the patient grows older the hyperkeratosis becomes more marked and the scaling more profuse On various parts of the body the scale formation resembles ichthyosis and in the flexures (bends of the elbows and knees) and axillae the thickening of the horny layer is marked

There are two varieties of this condition, the dry type and the bullous type In the bullous type the lesions vary in size and shape and appear in frequent outbreaks on the extremities, most frequently during the winter months.

There is a tendency for spontaneous improvement during the summer months

Subjective symptoms Mild to moderate itching, particularly after the use of soap and water on the trunk

Etiology Congenital

Histopathology Hyperkeratosis and acanthosis are present The microscopic picture is not diagnostic

Diagnostic aids History and physical examination.

Relation to systemic disease There is generalized diminution in perspiration over the body As a general rule the health is unimpaired

Differential diagnosis Ichthyosis keratoderma

Therapy Treatment is of little value If possible the patient should move to a warm climate The use of ultraviolet and administration of vitamin A in large doses may be useful



Fig 36. The "wet" type of ichthyosiform erythroderma

Intertrigo

Synonym Chafing

Sites of predilection Occurs on apposing surfaces such as under the breasts, between the folds of the abdomen between the thigh and between the scrotum and thighs

Objective symptoms Well defined to partially defined, bright pink macular lesions which are edematous, moist and macerated The lesions may eventually become infiltrated and eroded Fissures may develop under the breasts, in the folds of the abdomen or between the thighs

Subjective symptoms Moderate to intense itching Fissures may be painful

Etiology The condition may be precipitated between the apposing surfaces by the irritating action of soap deodorants bath powder perfume, etc Intertrigo is not a specific disease but is symptom The lesions may become secondarily infected by *Candida albicans* or the lesions of intertrigo may be the first clinical evidence of moniliasis.

Histopathology No specific picture

Diagnostic aids. Culture on Sabouraud's medium confirmed by cornmeal agar transfer

Relation to systemic disease Intertrigo most commonly develops in obese patients. Monilial infections commonly develop in obese diabetic patients.

Therapy The selection of the treatment method depends upon the causative factor As a general rule patients with this condition should avoid tub baths and use either a shower or a spray They should not use soap on the involved areas. Cool compresses of Burow's solution, diluted 1 32, may be applied to the involved areas for one-half hour several times daily Following the cool applications use either cornstarch or a nonmedicated talc as a dusting powder More specific medications should be applied when the etiologic factor has been discovered. In the case of monilial infection, Mycostatin ointment is effective

Keratosis Palmaris et Plantaris

Synonym. Ichthyosis palmaris et plantaris.

Sites of predilection The palms and soles.

Objective symptoms. This is a congenital condition in which the tissue of the palms and soles are symmetrically hyperkeratotic The intense hyperkeratosis varies in color from a dirty gray to brown and the surface is exceptionally dry The condition varies in severity from slight roughness to marked thickening of the keratin layer and intensification of the surface markings. Loss of elasticity is productive of painful fissure formation

Subjective symptoms. Discomfort caused by inability to close the hands or bend the feet pain caused by fissure formation.

Etiology The condition is usually hereditary as a dominant characteristic It is occasionally associated with ichthyosis.

Histopathology Marked hyperkeratosis and acanthosis without any evidence of inflammatory reaction

Diagnostic aids. None specific history and physical examination

Relation to systemic disease The general health is usually not involved.

Differential diagnosis Epidermophytosis eczema callouses arsenical keratoses.

Therapy None effective.

Kraurosis Vulvae

Synonym. None

Sites of predilection. Vulva

Objective symptoms. This is a progressive atrophic change in the labia majora and minora which leads to disappearance of the labia minora, prepuce and clitoris and gradual loss of the labia majora Because of these changes the vaginal orifice narrows. The tissues become smooth, shiny and dry and develop a yellowish, waxy appearance Leukoplakia may develop on the mucous membrane

Chronic progressive atrophic changes may take place on the glans penis of the male This condition is known as *kraurosis penis* The alterations in the mucous membranes are similar to those described in the female

Subjective symptoms Intense itching. Burning on urination is a common symptom

Etiology The condition may be caused by hormone imbalance or inactivity

Histopathology The histopathologic changes are characteristic. In the epidermis there is hyperkeratosis follicular plugging and general epidermal atrophy with flattening of the rete pegs There is liquefaction degeneration of the basal layer with edema in the upper cutis The infiltrate in the mid-cutis consists of plasma cells and round cells.

Diagnostic aids. Biopsy picture is specific

Relation to systemic disease It may indicate endocrine imbalance

Differential diagnosis. Senile atrophy

Therapy Estrogenic substance may be of value on local administration or when given parenterally

If malignant changes develop vulvectomy must be performed Radiation therapy is of little value.

Leprosy

Leprosy is classified primarily on the basis of clinical manifestations but laboratory confirmation is mandatory Bacterial studies, the lepromin reaction and the histopathologic examination must be performed The lepromatous and the tuberculoid type are the two officially recognized clinical types The indeterminate group of patients exhibit the benign but usually unstable manifestations which develop into lepromatous



Fig 37 Leprosy A Malum perforans B Alopecia C Depigmented anesthetic lesion D Claw hand E and F Leontiasis G Tuberculoid H Lepromatous I Simulating sarcoid J Loss of digit

or tuberculoid leprosy or remain indeterminate indefinitely The borderline or dysmorphic group have the unstable malignant form in which the lepromin test is generally negative The lesions in this type are flat bands, or nodules with regional distribution similar to that of the lepromatous type

The lepromatous type will be discussed in the chapter on Papular Eruptions

The tuberculoid type is described below

Synonym Hansen disease

Sites of predilection. The trunk elbows, knees, and face

Objective symptoms. The condition begins as reddish, variously sized macules which range in size from 3 to 10 or more cm. in diameter The lesions are well defined and usually coalesce forming large areas which change to a yellowish or brownish color and later become depigmented. Trophic changes may occur in the vicinity of the patches. The hair in the involved area becomes depigmented. *The course of the* disease is slowly progressive over many years The large nerve trunks, particularly the ulnar and peroneal become thickened, *rope-like and* tender The macular skin lesions become anesthetic. Trophic changes including ulcers and bone resorption occur on the extremities. Alopecia, eye lesions, and mucous membrane lesions may develop

Subjective symptoms The macular lesions are sensitive at first but later become anesthetic The large nerve trunks are tender

Etiology Mycobacterium leprae The mode of transmission is unknown. Infection occurs only after prolonged and close contact

Histopathology All active leprosy lesions have a tuberculoid histologic structure The nodules consist of masses of connective tissue cells with intermingled lymphocytes, plasma cells and mast cells. The *characteristic lepra or foam cell* which contain the acid fast bacteria are present. Lymph nodes show a lepromatous structure and contain bacilli in the majority *of lepromatous* cases and show the tuberculoid structure in tuberculoid cases.

Diagnostic aids. Acid fast organisms may be demonstrated from the lesions of lepromatous leprosy but rarely from the lesions of the tuberculoid type. The lepromin test is positive in tuberculoid leprosy but negative in the lepromatous type The organisms may be found in nasal smear Biopsy findings are characteristic

Relation to systemic disease Amyloid nephrosis is the major cause of death in lepromatous leprosy Progressive weakness anemia, and emaciation are also associated with the lepromatous type The prognosis in the lepromatous form is poor The patient with tuberculoid leprosy may live for many years

Differential diagnosis Syphilis tuberculosis granuloma fungoides syringomyelia vitiligo lupus erythematosus leukemia cutis

Therapy Improvement in general hygiene good food, fresh air and sunlight Chemotherapy with Promin, Diasone or Promizole is specific

Leukemia Cutis

Synonym Leukemia with cutaneous manifestations.

Sites of predilection Generalized.

Objective symptoms. There is usually a wide-spread, *confluent erythematous, macular eruption which* is pink to dark red or violaceous in color The lesions are moderately to markedly infiltrated and lichenification may be pronounced. Occasionally the involved areas are covered with a moderate amount of adherent dry scale Linear excoriations and blood crusts are part of the *clinical* picture Other cutaneous lesions occasionally associated with the leukemia are purpura of various types, bullae nodules and ulcerations.

Subjective symptoms Itching is usually intense

Etiology Unknown. The development of these cutaneous lesions may precede the appearance of changes in the blood picture

Histopathology There is a well demarcated infiltrate of round cells and occasionally *large lymphoblastic* cells in the upper layers of the cutis The infiltrate is not necessarily limited to nodules or tumors. There is some acanthosis and hyperkeratosis.

Diagnostic aids. Biopsy blood picture studies of *sternal marrow* history and physical examination.

Relation to systemic disease The condition is a cutaneous manifestation of a systemic disease The appearance of the cutaneous lesions frequently precedes onset of the changes in the blood picture

Differential diagnosis Eczema seborrheic dermatitis exfoliative dermatitis atopic dermatitis

Therapy Treatment of systemic disease Local therapy is of no value

Leukoderma Acquisitum Centrifugum

Synonym Sutton's nevus

Sites of predilection Trunk

Objective symptoms The lesion is a depigmented macule which varies in size from 1 to 3 cm in diameter In the center of the vitiligoid area there is a small brown maculopapule

Subjective symptoms None

Etiology Congenital

Histopathology The central nevus consists of an intradermal mass of melanophores

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Vitiligo

Therapy None

LUPUS ERYTHEMATOSUS

Lupus erythematosus is a constitutional disease because regardless of the clinical type discoid subacute or disseminated it extends beyond the skin and affects the entire body In common with other collagen diseases there is inconstancy of symptoms however the basic pathologic features observed in the discoid form are similar to those of the systemic form Variations in the clinical picture correspond to the different developmental stages of the disease The transition from discoid lupus erythematosus to the final severe picture of systemic lupus erythematosus is frequently characterized by a corresponding increase in intensity and extent of the cutaneous lesions with the development of visceral symptoms In some patients the symptoms of systemic lupus erythematosus develop in the absence of cutaneous lesions

The cause of this condition is unknown It has been postulated that it is caused by a peculiar allergic phenomenon Lupus erythematosus occurs most frequently in women between the ages of 20 and 40 years Approximately 5 per cent of those patients who have discoid lupus erythematosus eventually develop systemic manifestations. In systemic lupus erythematosus hypergammaglobulinemia is a constant finding Hematologic abnormalities include hypochromic and hemolytic anemia leukopenia granulocytopenia eosinophilia increased erythrocyte sedimentation rate cold agglutinins a positive direct Coombs test and the lupus erythematosus cell Biologic false positive serologic tests for syphilis and abnormal liver function tests may occur

Actinic trauma may precipitate or aggravate lupus erythematosus The mechanism of this action is probably polymorphous light hypersensitivity

Lupus Erythematosus Discoid

Synonym None

Sites of predilection Face scalp ears, and neck Other areas may be involved

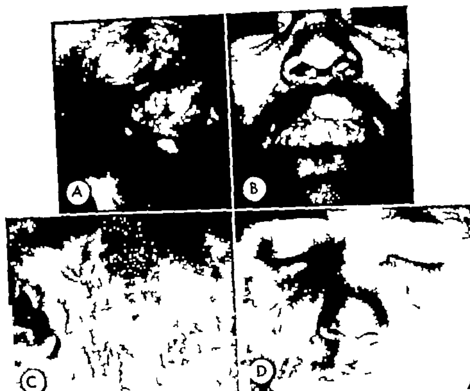
Objective symptoms There are one or more sharply defined slightly raised macules The lesions are dull pink to red in color and are covered with a scant amount of adherent dry scale The lesions spread peripherally Butterfly lesions occasionally develop on the face In older lesions the inflammatory reaction occurs primarily in the margin and the central areas are atrophic and depigmented Telangiectases may occur The dilated follicular orifices are filled with hyperkeratotic material (follicular plugs) Mucous membrane lesions, simulating leukoplakia may develop

Subjective symptoms Mild itching may be present In extensive discoid lesions the cosmetic defect may cause emotional imbalance

Etiology Unknown

Histopathology Atrophy of the epidermis and epidermal appendages, hyperkeratotic plugging slight edema of the lower epidermal cell (liquefaction degeneration of the basal layer) and a dense well defined mononuclear cell infiltrate which tends to be peri appendageal

Diagnostic aids The histopathologic picture is diagnostic biopsy Lupus erythematosus cell



F 39 Discoid lupus erythematosus A Atrophic scar th hyperpigmented margin B Lip lesions C Follicular plug formation D "Butterfl distribution

studies hemograms, albumin-globulin ratio, urinalysis, liver function studies, and x-ray examinations of the chest

Relation to systemic disease Although in the vast majority of cases, the discoid variety of lupus erythematosus runs a chronic benign course, approximately 3 per ce t of these patients eventually develop ymptoms of systemic lupus erythematosus The clinical picture of discoid lupus erythematosus and the histopathologic picture of lupus erythematosus does not exclude the possibility of ystemic manifestations. On every patient the diagnosis must be confirmed histopathologically

Differential diagnosi Seborrheic dermatitis rosacea eczema psoriasis erysipelas.

Therapy Chloroquin, Plaquenil Camoquin Triquin, nd At brine are effecti e systemic medications. Locally patients should use sun protect e cream such as A-fil or Skolex

Lupu Erythematosus Sy temic

Synonym. None

Sites f predilection. Generalized.

Objective symptoms Discrete and confluent sharply defined, pinkish, edematous macules. Telangiectases may develop and occasionally the lesions become hemorrhagic. On the hands the distal phalanges develop a bluish-red discoloration and on the feet the lateral margins the transverse arch, and the distal phalanges develop a similar ppearance. The early lesions may simulate erythema multiforme or urticaria Older lesions on the face and trunk may become covered with adherent dry scale Atrophic scarring is usually not present unless discoid lesions precede the systemic manifestations. Fever may be present.

Subjective symptoms Generalized malaise loss of weight, night sweat joint pains muscle tenderness, and gastric disturbances.

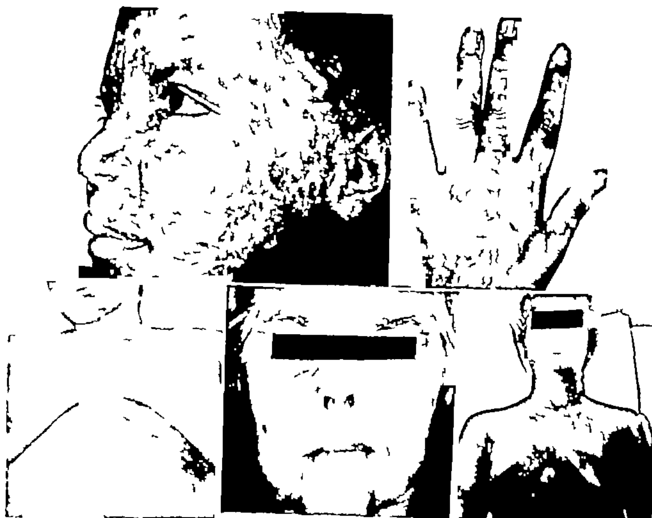


FIG 39 Systemic lupus erythematosus

Etiology Unknown The condition occurs most commonly in females

Histopathology Atrophy of the epidermis with severe edema in the lower cells of the rete lack of infiltrate and marked edema in the cutis.

Diagnostic aids Biopsy lupus erythematosus cell studies albumin-globulin ratio hemograms X-ray of chest liver function studies electrocardiogram electrophoresis

Relation to systemic disease The condition occasionally develops in the absence of skin lesions. Clinical manifestations are frequently produced by excessive exposure to sunlight Systemic manifestations of lupus erythematosus include hepatitis, bronchopneumonia pulmonary abscess, pleural effusions, verrucous endocarditis, depression of the bone marrow polyserositis peritonitis nephrosis, nephritis and thrombocytopenic purpura

Differential diagnosis The cutaneous lesions resemble those of purpura erythema multiforme urticaria seborrheic dermatitis, or eczema

Therapy Systemic steroid therapy using adequate dosage of cortisone hydrocortisone prednisone prednisolone Aristocort Medrol or ACTH Bed rest Supportive treatment Avoid exposure to sunlight Systemic lupus erythematosus may run a benign course not requiring intensive steroid therapy

Mongolian Blue Spot

Synonym None

Sites of predilection Lower sacral area

Objective symptoms Variously sized and variously shaped bluish or dark brown macular lesions which range in size from ? to 10 cm in diameter The lesions are partially to well defined of normal skin texture and noninflammatory

They are more commonly seen in Asiatics and in Negroes, but they also occur in Caucasians. These nevoid lesions usually disappear or become less obvious after a few months.

Subjective symptoms. None

Etiology. Congenital.

Histopathology. The specific cells responsible for the pigmentation resemble those of the blue nevus. The pigment is melanin.

Diagnostic aids. History and physical examination, biopsy.

Relation to systemic disease. None

Differential diagnosis. Nevus of any type.

Therapy. None. The condition is usually self limited.

Myringomycosis (Ringworm of the Ear Canals)

Although this diagnosis is frequently made there is no laboratory foundation for its existence. These patients usually have a scaling macular eruption involving the external auditory canal and a portion of the auricle. The intensity of the lesions vary from mild erythema to lichenification with scaling and fissure formation. Occasionally secondary pyogenic infection develops. Associated with this condition in the presence of secondary pyogenic infection is the eruption known as infectious eczematoid dermatitis. This condition is actually not a fungus infection but is either seborrheic dermatitis or neurodermatitis.

Myxedema, Generalized

Synonym. Hypothyroidism.

Sites of predilection. Generalized.

Objective symptoms. The skin is dry, yellowish, and edematous but does not pit on pressure. The lips and nose are thickened and the eyelids droop forming masklike expressionless facies, characteristic of the condition. There is irregular hyperpigmentation on exposed surfaces. The nails become fragile and there is generalized thinning of the hair. Hyperkeratoses may develop on the palms and soles. The patient is subnormal mentally, moves sluggishly, is apathetic and his hearing and speech are affected.

Subjective symptoms. The cutaneous lesions are not productive of subjective symptoms.

Etiology. Hypothyroidism. The condition may develop following thyroidectomy.

Histopathology. Mucinous infiltration of the cutis with development of immature connective tissue cells.

Diagnostic aids. History and physical examination, basal metabolic rate, protein bound iodine test, biopsy.

Relation to systemic disease. Myxedema is caused by thyroid insufficiency.

Differential diagnosis. Scleroderma, scleredema, elephantiasis.

Therapy. Treatment of the thyroid insufficiency.

Myxedema, Localized Pretibial

Synonym. Pretibial myxedema.

Sites of predilection. Extensor surfaces of the legs.

Objective symptoms. The lesions are variously sized irregular plaques of nonpitting edema. Small papules *may* be present on the surface of the lesions. *The follicular orifices* are greatly dilated. *The color of the skin in the involved area* varies *from* pale yellow to light reddish-brown. Associated with localized myxedema there *are signs* of hyperthyroidism including exophthalmos.

Subjective symptoms. The cutaneous lesions are asymptomatic.

Etiology. The mechanism of production of localized myxedema in the presence of hyperthyroidism is unknown. It has been theorized that the *mechanism* of production of localized myxedema *is the same as that* responsible for the production of exophthalmos. The lesions may develop following thyroidectomy.

Histopathology. There is mucinous *infiltration* in the cutis and immature connective *tissue* cells are present.

Diagnostic aids. History and physical examination, basal metabolic rate, protein bound iodine test. Biopsy.

Relationship to systemic disease. Localized myxedema is invariably associated with hyperthyroidism, particularly with exophthalmos.

Differential diagnosis. Elephantiasis, scleroderma.

Therapy. There is no effective therapy for the cutaneous lesion.

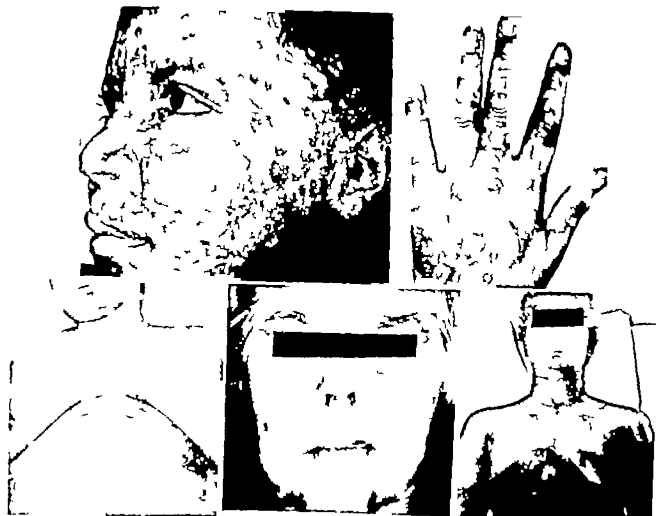


FIG 30 Systemic lupus erythematosus

Etiology Unknown The condition occurs most commonly in females

Histopathology Atrophy of the epidermis with severe edema in the lower cells of the rete lack of infiltrate and marked edema in the cutis.

Diagnostic aids Biopsy lupus erythematosus cell studies albumin-globulin ratio hemograms x rays of chest liver function studies electrocardiogram electrophoresis

Relation to systemic disease The condition occasionally develops in the absence of skin lesions Clinical manifestations are frequently produced by excessive exposure to sunlight Systemic manifestations of lupus erythematosus include hepatitis bronchopneumonia pulmonary abscess, pleural effusions, verrucous endocarditis, depression of the bone marrow polyserositis peritonitis nephrosis nephritis, and thrombocytopenic purpura

Differential diagnosis. The cutaneous lesions resemble those of purpura erythema multiforme urticaria seborrheic dermatitis, or eczema

Therapy Systemic steroid therapy using adequate dosage of cortisone hydrocortisone prednisone prednisolone Aristocort Medrol or ACTH Bed rest Supportive treatment Avoid exposure to sunlight Systemic lupus erythematosus may run a benign course not requiring intensive steroid therapy

Mongolian Blue Spot

Synonym None

Sites of predilection Lower sacral area

Objective symptoms Variously sized and variously shaped bluish or dark brown macular lesions which range in size from 2 to 10 cm in diameter The lesions are partially to well defined, of normal skin texture and noninflammatory

lar nevus in which there is a profuse growth of hair

Subjective symptoms None except the embarrassment caused by the cosmetic defect

Etiology Congenital.

Histopathology The nevus cells are characteristically large pale or dark, and have oval nuclei. These cells, occurring in strands and nests are massed in the cutis.

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Varicosities café-au-lait spots of neurofibromatosis warts of various types.

Therapy There is no specific treatment The larger lesions may be removed by plastic repair These lesions do not respond to radiation

Nevus Vasculosus

Synonym Nevus flammeus port wine stain

Sites of predilection Occur on any part of the body

Objective symptoms These well defined red to purplish-red macular lesions vary in size from 1 to 20 cm or more in diameter The lesions may be slightly raised presenting a plaque-like appearance with few to numerous dark papules or nodules scattered over the surface

A variant of this nevus is the irregularly shaped, reddish, macular lesion which frequently occurs on the back of the neck, just below the external occipital protuberance and makes its appearance at birth This type of lesion frequently may disappear spontaneously within the first 10 years of life or be persistent

Subjective symptoms None except the embarrassment caused by the cosmetic defect

Etiology Congenital.

Histopathology This varies with the extent and severity of the lesion and may be manifested as simple acanthosis with vascular dilatation in the upper cutis

Diagnostic aids Clinical appearance biopsy

Relation to systemic disease May be associated with the Sturge-Weber syndrome

Differential diagnosis Clinical appearance is diagnostic

Therapy Small lesions may be obliterated by the use of carbon dioxide snow In infants and young children satisfactory results have been obtained with the use of Grenz ray or thorium X.

Papillary Varices

Synonym Cayenne pepper spots senile angioma.

Sites of predilection The trunk.

Objective symptoms These are small bright red or purplish papules which vary in size from 1 to 3 mm. in diameter The papule may be composed of dilated blood vessels or it may be filled with fluid blood. The lesions occur most commonly on the trunks of middle aged or elderly persons.

Subjective symptoms. None

Etiology Unknown

Histopathology The epidermis over these lesions is atrophic Elastic tissue is greatly diminished. There are densely packed groups of dilated capillaries.

Diagnostic aids Clinical appearance biopsy

Relation to systemic disease None

Differential diagnosis Nevus araneus nevus vasculosus

Therapy Excision or electrodesiccation

Pellagra

Synonym None

Sites of predilection. Dorsal surfaces of the hands, wrists forearms the face neck, and exposed portion of the chest the feet and legs. Mucous membranes are also involved.

Objective symptoms The cutaneous lesions begin



F 40 Pellagra

Nevus Anemicus

Synonym Anemic nevus

Sites of predilection Chest face back and other areas.

Objective symptoms The lesions which vary in size and shape from 2 to 5 cm in diameter are depigmented macules The borders are sharply defined and the surrounding skin is normal in color There is no change in skin texture

Subjective symptoms None

Etiology Congenital

Histopathology There is a lack of blood vessels in the involved areas. Elastic fibers are normal in amount The epidermis is unchanged

Diagnostic aids History and physical examination biopsy

Relation to systemic disease None

Differential diagnosis Vitiligo

Therapy None

Nevus Araneus

Synonym Spider nevus spider mole

Sites of predilection Face trunk and extremities.

Objective symptoms This common vascular nevus consists of a tiny central red spot from which numerous, tortuous, minute vessels radiate for a short distance The central point may be slightly elevated The lesion may pulsate In children these lesions are frequently self limited In adults, they are persistent

Subjective symptoms None

Etiology Congenital May be associated with systemic illnesses may be associated with pregnancy

Histopathology The microscopic picture is not diagnostic

Diagnostic aids Clinical appearance

Relation to systemic disease The lesions are usually congenital They have also been associated with chronic alcoholism estrogenic hormone therapy pregnancy and liver disease

Differential diagnosis Telangiectases from any cause

Therapy In young children the lesions are usually self limited and no treatment is indicated. In adults the lesions may be obliterated by the use of electrolysis or high frequency current The needle must be inserted into the central vessel before the current is turned on

Nevus Follicularis

Synonym Nevus comedonicus

Sites of predilection Face and trunk.

Objective symptoms A unilateral circumscribed area which varies in size and is irregularly shaped and in which there are numerous lesions resembling comedones. These comedo-like lesions are dilated follicles which are filled with keratin Cystic lesions and acneform lesions may develop

Subjective symptoms None

Etiology Congenital

Histopathology Cystic cavities are lined with stratified hyperkeratotic epithelium and fat cells The sweat glands in the region of the nevus are distorted

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Chloracne tattoo

Therapy Excision and plastic repair dermabrasion

Nevus Pigmentosus

Synonym Pigmented nevus birthmark mole hairy mole bathing trunk nevus nevus pilosus junction nevus.

Sites of predilection May occur on any part of the body The bathing-trunk nevus involves the lower trunk and upper thighs.

Objective symptoms These lesions are well defined macules which are most commonly present at birth or develop during the first few years of life The lesions vary in size and shape from a few millimeters to large plaques many centimeters in diameter Nevi vary in color from tan to dark brown or black They are soft in texture not inflamed and not elevated Dark brown to blackish papules may appear in the larger plaque-like lesions.

The bathing trunk nevus is a medium to dark brown nevus which involves the lower trunk, the genitalia and the upper portions of the thighs

Nevus pilosus is the name applied to a macu

nettes or Negroes. It is associated with the seborrheic dermatitis complex.

Subjective symptoms. None as a general rule. Slight itching may be present.

Etiology. Unknown.

Histopathology. Slight hyperkeratosis and acanthosis with a nonspecific cellular infiltrate in the upper layer of the cutis.

Diagnostic aids. Clinical appearance.

Relation to systemic disease. None.

Differential diagnosis. Vitiligo, eczema, tinea circinata.

Therapy. The condition is usually self-limited. An ointment containing 2.5 per cent of salicylic acid and precipitated sulfur in petrolatum is usually satisfactory.

Pityriasis Rosea

Synonym. None.

Sites of predilection. Trunk, neck, thighs, and arms. Lesions seldom appear on the face.

Objective symptoms. A herald patch, which may precede the onset of the generalized eruption by one to three weeks, is a single large, round or oval, slightly scaly, annular lesion. This macular lesion may or may not be present. The generalized eruption consists of numerous, discrete, pinkish, oval or round, macular or papular, well defined lesions. Central involution may occur forming annular lesions which vary in color from dull red to pink. Scale formation may be central or marginal, but usually peels toward the margin. The long axes of the oval lesions parallel the lines of cleavage.

Because of overzealous treatment or local irritation, the eruption may become eczematized, and the lesions lose their sharp definition.

The eruption is self-limited, disappearing spontaneously in 8 to 10 weeks. Recurrences are rare. It is noncontagious.

Subjective symptoms. None to slight or severe itching.

Etiology. Unknown. It may be infectious in origin. The highest incidence of the eruption is during the late fall, winter, and early spring months.

Histopathology. Not diagnostic. There is vascular dilatation of the capillaries in the papillae with a mild inflammatory infiltrate consisting of lymphocytes and plasma cells.

Diagnostic aids. Clinical appearance; rule out fungus infection by scraping and culture.

Relation to systemic disease. No specific relationship.

Differential diagnosis. Macular syphilis, tinea circinata, seborrheic dermatitis, eczema.

Therapy. Ultraviolet in erythema doses. Calamine liniment and other antipruritics. Emollient baths.

Poikiloderma Atrophicans Vasculare

Synonym. Poikiloderma atrophicans vasculare of Jacobi.

Sites of predilection. Axillary folds, inguinal regions, and other parts of the body. Rarely on the face.

Objective symptoms. The eruption begins as circumscribed macular lesions which generally spread to involve the entire body. The lesions are well-defined to partially-defined, confluent areas of reddish brown macules in which there are telangiectases, capillary hemorrhages, and areas of depigmentation. The surface is dry, wrinkled, and atrophic. The clinical appearance resembles that of roentgen ray dermatitis.



F[illegible] 41. Pityriasis rosea.

as erythematous macules simulating sunburn. As the eruption develops the lesions become dark red and hyperpigmented. The skin in the involved areas is edematous and exfoliation occurs in large flakes or plaques. The eruption is usually sharply demarcated at the distal thirds of the forearms and the legs producing the so-called "glove and stocking appearance." In intervals between attacks, the skin retains its hyperpigmentation, but with repeated attacks, hyperkeratotic lesions may develop on the exposed surfaces. An unpleasant odor accompanies the skin eruption.

Associated with the cutaneous lesions there is fissure formation at the commissures of the lips (perlèche) and a beefy red appearance of the tongue and buccal mucosa.

Severe systemic symptoms are associated with the cutaneous and mucous membrane lesions.

Sunlight apparently has an influence on the development and exacerbation of lesions.

Subjective symptoms. Cutaneous lesions itch or burn. Other symptoms vary in severity with the degree of systemic involvement.

Etiology. Deficiency in the vitamin B complex, particularly nicotinic acid. Dietary inadequacy.

Histopathology. Nonspecific. There is irregular hyperkeratosis, atrophy of the epidermis and an inflammatory infiltrate in the upper layers of the cutis.

Diagnostic aids. History and physical examination.

Relation to systemic disease. The cutaneous lesions are important as diagnostic factors only. This is a specific avitaminosis. The classical "four D's" of dermatitis, diarrhea, dementia and death indicate the degrees of severity.

Neurologic manifestations include polyneuritis and paresthesias. Psychotic symptoms may be mild or severe. Gastrointestinal symptoms vary from mild digestive disturbances to severe watery diarrhea. Secondary monilial infection may occur in the mouth or about the genitalia. Emaciation and weakness may be extreme.

Although this condition predominates in persons of the lower economic strata and the elderly, the condition may also occur in chronic alcoholics or mentally defective individuals who refuse to eat proper foods.

Differential diagnosis. Eczema, sunburn, seborrheic dermatitis, contact dermatitis.

Therapy. Nicotinic acid by mouth or by injection, vitamin B complex by mouth or by injection, adequately balanced diet containing large amounts of protein, restriction of alcohol intake.

Pigmentary Dermatosis, Progressive

Synonym. Schamberg's disease, hemosiderosis.

Sites of predilection. Lower extremities.

Objective symptoms. The eruption begins with the development of minute pin-point reddish, macular lesions which spread peripherally to form irregular confluent areas. The reddish spots (cayenne pepper spots) eventually disappear, leaving confluent brownish or reddish brown pigmented areas which may be persistent or slowly fade. Lichenification and scaling may develop as secondary manifestations.

Subjective symptoms. None.

Etiology. Unknown.

Histopathology. The epidermis may be normal or hyperkeratotic and hyperpigmented. The cellular infiltrate in the cutis consists of connective tissue cells and polymorphonuclear leukocytes, some of which contain iron pigment granules. When the inflammatory reaction subsides there is a deposit of hemosiderin.

Diagnostic aids. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. Stasis dermatitis.

Therapy. None of any value.

Pityriasis Alba

Synonym. None.

Sites of predilection. Face, chest, and upper extremities.

Objective symptoms. The lesions are ill defined or partially defined, slightly scaly, partially depigmented macules. It occurs most commonly in infants and young children. It may begin as an erythematous macule which is slightly scaly and when the erythema subsides the depigmentation remains. This condition occurs in all races but the lesions are more obvious in bru

Relation to systemic disease. This condition is frequently associated with diabetes mellitus, carcinoma, disease of the ovaries and tubes, malignancies, systemic infection, and senescence.

Therapy. The elimination of local causative factors. One per cent hydrocortisone ointment or other topical steroid preparations are of value. Adequate sedation is usually necessary. Mycostatin ointment is indicated in the treatment of monilial infections.

Pseudoxanthoma Elasticum

Synonym. Gronblad-Strandberg syndrome.

Sites of predilection. Sides of the neck, the axillary folds, the groins, and the umbilical region.

Objective symptoms. This condition, which is usually limited to adults, develops as discrete and confluent small yellowish-white maculopapules which coalesce to form plaques. The skin in the involved areas is soft and velvety. Occasionally calcification develops in the lesions. On ophthalmoscopic examination angioid streaks may be seen in the retina.

Subjective symptoms. None.

Etiology. Unknown.

Histopathology. There is fragmentation and clumping of the elastic tissue which takes a basic stain.

Diagnostic aid. Biopsy.

Relation to systemic disease. The elastic tissue of any or all of the blood vessels in the body may be involved. The condition may occur in association with scleroderma or lupus erythematosus. Severe gastric or uterine hemorrhage, hypertension, aneurysms, and calcification of the vessels of the lower extremities have been reported in association with this condition.

Differential diagnosis. The clinical appearance is characteristic.

Therapy. None effective.

Purpura Annularis Telangiectodes

Synonym. Majocchi's disease.

Sites of predilection. Lower extremities.

Objective symptoms. Lesions are sharply defined bright pink to red macules, which are distributed over the thighs, legs, and feet and occasionally on the upper extremities and trunk. The lesions are well defined, round or irregular annular macules. Brownish pigmentation suggestive of hemosiderosis develops about the periphery of the annular lesions. Telangiectasia develops throughout the lesions.

Subjective symptoms. Mild itching may be present.

Etiology. The cutaneous lesions may be a manifestation of some underlying systemic disease.

Histopathology. The epidermis is not involved. There are vascular dilatation, perivascular round-cell infiltration, and iron pigment deposits in the cutis.

Diagnostic aids. Biopsy, general physical examination, bleeding and clotting time, hematocrit.

Relation to systemic disease. This cutaneous lesion may be a manifestation of cardiovascular disease, endocrine disturbances, or other constitutional illnesses.

Differential diagnosis. Schamberg's disease, pigmented purpuric lichenoid dermatitis, eczema.

Therapy. Treatment of systemic illness.

Purpura, Nonthrombocytopenic

Synonym. Purpura simplex, Henoch's purpura, Schönlein's purpura, symptomatic purpura.

Sites of predilection. May be generalized. Extent of lesions varies with type and severity.

Objective symptoms. *Purpura simplex* is manifested by an eruption of variously sized red to purplish macular lesions which do not blanch on pressure. The condition is characterized by relapses and remissions. The tourniquet test may or may not be positive. Occasionally urticaria or erythema multiforme may accompany the attacks.

Henoch's purpura usually occurs in childhood. Urticaria or erythema multiforme may occur concurrently with the development of the purpuric lesions. The condition is frequently accompanied by hematemesis, abdominal discomfort, and tarry stools.

Schönlein's purpura is purpura simplex associated with arthritis or rheumatic fever. The hemorrhagic type of erythema multiforme may develop.

Subjective symptoms. The cutaneous lesions are usually asymptomatic. Urticarial lesions may cause itching. Other subjective symptoms are

Subjective symptoms Mild to moderate itching
Etiology Unknown
Histopathology There is atrophy of the epidermis perivascular round cell infiltration degeneration of collagen and diminution to disappearance of the elastic tissue
Diagnostic aids Biopsy
Relation to systemic disease This condition may develop into granuloma fungoides.
Differential diagnosis Roentgen ray dermatitis lupus erythematosus granuloma fungoides scleroderma melanosis of Riehl
Therapy None effective

Pruritus Ani

Synonym Itching anus
Sites of predilection Anus and perianal region
Objective symptoms Objective symptoms vary from none to chronic lichenified dermatitis with fissure formation If an eruption is present it begins as a reddish edematous, macular lesion which encircles the anus and extends toward the coccyx and the perineum The surface is excoriated and blood crusting may be present In the chronic stage the skin in the involved area becomes thickened and lichenified Fissures develop in the gluteal cleft over the coccyx, and in the perineum

Pruritus ani which develops following systemic antibiotic therapy presents an eczematous appearance and is usually complicated by monilial infection In these patients the surface of the lesion is macerated and is covered with a moist whitish film
Subjective symptom Moderate to intense itching Loss of sleep and emotional instability may develop as a result of severe subjective symptoms.
Etiology Where objective symptoms are absent emotional tension diabetes food allergy or other systemic illness may be the responsible agent

Systemic antibiotic therapy is a frequent cause of this condition Fungus infection and contact sensitization may also be productive of pruritus ani Intestinal tumors, foreign bodies and colitis may also cause anal itching
Histopathology The microscopic picture is nonspecific
Diagnostic aids Adequate history and physical examination blood picture urinalysis scrapings and culture for fungi rectal examination.
Relation to systemic disease Diabetes mellitus Hodgkin's disease rectal malignancies systemic infection mental illness and allergic disturbances are among the underlying systemic diseases responsible for the production of pruritus ani.
Differential diagnosis Fungus infection animal parasitic diseases eczema
Therapy Treatment of the underlying systemic disease Adequate sedation local application of hydrocortisone ointment or lotion or other steroid preparations

Pruritus Vulvae

Synonym Itching vulva
Sites of predilection Female genital area
Objective symptoms Objective symptoms may be absent The lesions vary in appearance according to the causative factors. The eruption may involve a single localized area on one labium majus or it may be generalized involving both labia the mons pubis, the perineum, and the labia minora In the early stages the lesions are pinkish macules but as the eruption becomes persistent the skin becomes thickened and lichenified Excoriations are present Furuncles may develop If secondary monilial infection occurs the involved areas may be covered with a whitish film The eruption may extend across the perineum to surround the anus Pruritus vulvae is also a symptom of kraurosis vulvae
Subjective symptoms. Moderate to intense itching
Etiology Pruritus vulvae like pruritus ani is a symptom and not a disease It may be a fungus infection *Trichomonas vaginalis* emotional tension contact dermatitis, parasitic infestation and various systemic diseases.
Histopathology The microscopic picture is not diagnostic
Diagnostic aids Complete blood picture urinalysis history and physical examination vaginal examination cultures for fungi studies for *Trichomonas vaginalis*

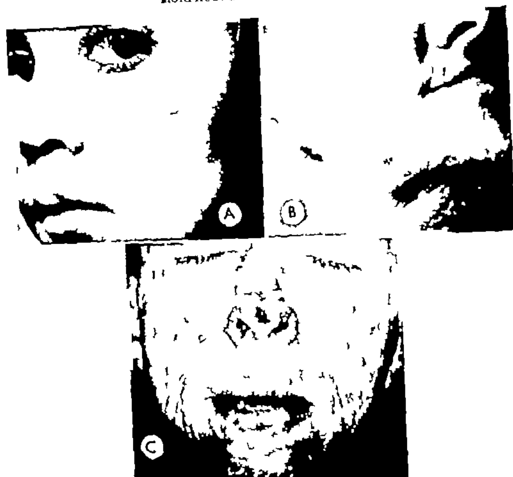


Fig. 42 Radiodermatitis. A Following treatment for hemangioma. B Following treatment for hirsutism. C Following treatment for acne 20 years ago. Note epithelioma on the nose.

Histopathology Atrophy of the epidermis, dilatation of vessels, degeneration of collagenous tissue, and absence of appendages. Dyskeratotic cells, karyorrhexis, epitheliomatous degeneration, and squamous cell carcinoma are seen in later stages.

Diagnostic aids History and physical examination biopsy.

Relation to systemic disease None.

Differential diagnosis. Farmer-sailor skin, xeroderma pigmentosum, poikiloderma atrophicans vasculare, telangiectasia, granuloma fungoides.

Therapy Excision of small areas; steroid ointments may be of value in treatment of the acute phase; operative removal of carcinomas.

Raynaud Disease

Synonym None.

Sites of predilection. Extremities.

Objective Symptoms The condition begins gradually as intermittent episodes during which the fingers and toes become pale with marked decrease of the skin temperature. The symptoms are more severe in cold weather. Eventually the affected parts become persistently cyanotic. Gangrene develops when the vasospasm is complicated by thrombosis. The fingers, toes, or both may be equally affected.

Subjective symptoms Numbness, tingling, and pain. Exposure to cold produces pain

those related to the systemic disease causing the eruption

Etiology Penicillin coal tar antipyretics tetanus antitoxin smallpox vaccine other drugs and food allergens are frequently responsible for the production of these lesions. Ingestion of alcohol may produce purpura simplex Henoch s purpura may be caused by bacterial infection food or drug allergies Schönlein s purpura is associated with rheumatic fever

Histopathology Vascular dilatation with hemorrhage into the cutis.

Diagnostic aids History physical examination complete blood picture bleeding and clotting time tourniquet test prothrombin time

Relation to systemic disease The condition may indicate some underlying allergic disease rheumatic fever vitamin deficiency kidney damage liver damage systemic bacterial infections, and endocrine disorders

Differential diagnosis Thrombocytopenic purpura

Therapy Treatment of the underlying disease Local therapy is of no value

Purpura Thrombocytopenic

Synonym Primary idiopathic purpura purpura hemorrhagica

Sites of predilection Extremities mucous membranes occasionally generalized

Objective symptoms This is a severe frequently fatal condition characterized by extensive hemorrhages into the skin mucous membranes, and viscera The cutaneous lesions are discrete and confluent small and large red bluish red or dark purplish areas from which the color can not be expressed by pressure Associated with the skin lesions, there is frequently hemorrhage from the mucous membranes of the nose and mouth with the formation of blood crusts on the lips The gums are soft and spongy and bleed on the slightest trauma Splenomegaly may develop

There is a marked decrease in the platelet count prolongation of bleeding time increased capillary fragility and delayed clot retractility The morphology of the blood cells is unchanged

Subjective symptoms Weakness, anorexia

Etiology Unknown The symptoms result from the destruction of platelets, red cells, and other formed elements of the blood

Histopathology Capillary fragility with hemorrhage into the cutis

Diagnostic aids History and physical examination complete blood picture bleeding and clotting time platelet count prothrombin time

Relation to systemic disease Condition may be associated with congenital hemolytic anemia primary pancytopenia, and aplastic anemia

Differential diagnosis Purpura simplex.

Therapy Transfusions vitamin K splenectomy systemic corticosteroid therapy Local therapy is of no value

Radiodermatitis

Synonym X ray burn radium burn

Sites of predilection Any area exposed to ionizing radiation

Objective symptoms There are three types of cutaneous postradiation damage

1 Hyperpigmentation freckling mild hypertrichosis and skin dryness may occur during or after a course of fractional x ray treatment for acne vulgaris or other benign conditions. The intensive radiation therapy used for the treatment of epitheliomas usually produces an inflammatory reaction with edema and a deeply pigmented area which outlines the site of therapy If the dose has not been excessive the reaction subsides without sequelae

2 After a period of months or years following excessive radiation therapy (radium or x ray) atrophic scarring telangiectasia and permanent hair loss develops. Keratoses may form

3 Another delayed reaction to excessive radiation is the development of indolent ulcers and squamous cell epithelioma in the areas of atrophic scar formation

Subjective symptoms Moderate to severe discomfort may accompany acute radiodermatitis Later lesions may cause pain

Etiology Excessive radiation therapy or careless use of diagnostic x ray equipment by untrained personnel

10 to 15 days the eruption may begin in the buccal mucosa with reddened fauces coated tongue and reddish lesions with central, whitish points (Koplik's spots) opposite the molars. The cutaneous lesions first appear on the face and spread to involve the neck and then the rest of the body. The lesions are numerous variously sized, small macules and papules which range in size from 2 mm. to 1 cm. in diameter. The larger lesions are oval or crescent shaped, ill defined and reddish, and appear primarily on the trunk. After 4 to 6 days the eruption fades and a fine furfuraceous exfoliation occurs. Koplik spots disappear when the cutaneous lesions develop.

Upper respiratory symptoms include rhinitis, laryngitis and stomatitis. Conjunctivitis is the major ocular symptom. At the height of the disease the temperature ranges from 101 to 104°F. The eruption lasts from 3 to 10 days.

Subjective symptoms. Malaise photophobia chills and fever and slight itching.

Etiology. A filtrable virus.

Histopathology. The microscopic picture is not diagnostic.

Diagnostic aids. History and physical examination throat culture.

Relation to systemic disease. Measles is frequently productive of sequelae such as pneumonia and encephalitis.

Differential diagnosis. Rubella scarlatina macular syphilid pityriasis rosea erythema simplex drug eruptions Rocky Mountain spotted fever.

Therapy. Bed rest supportive treatment.

Rubella

Synonyms. German measles three day measles.

Sites of predilection. Generalized.

Objective symptoms. The condition begins with mild prodromal symptoms. The eruption first appears on the face then spreads to the neck and chest. The lesions are numerous, discrete, partially to well defined pinkish macules or maculopapules with absence of scale. The lesions may be numerous and so closely grouped that the condition simulates scarlatina. Associated with the eruption there is enlargement of the postcervical, postauricular and suboccipital lymph nodes. The patient's temperature seldom exceeds 100°F. The lesions fade in from 3 to 5 days without perceptible exfoliation. The incubation period is from 14 to 21 days. One attack confers immunity.

Subjective symptoms. Slight malaise.

Etiology. A filtrable virus.

Histopathology. The microscopic picture is not diagnostic.

Diagnostic aids. History and physical examination.

Relation to systemic disease. The cutaneous lesions are evidence of a systemic virus infection. Rubella complicating pregnancy may produce congenital defects in the fetus.

Differential diagnosis. Measles macular syphilid drug eruptions scarlatina erythema simplex.

Therapy. Bed rest aspirin.

Scarlatina

Synonym. Scarlet fever.

Sites of predilection. Generalized.

Objective symptoms. The condition is manifested by a sudden onset of a macular eruption which quickly involves the entire body. The lesions are closely aggregated, discrete minute bright red macules which give the body surface a scarlet hue. There is usually circumoral pallor. The bright red color temporarily disappears on light pressure. When the acute phase subsides between the seventh and tenth days exfoliation begins in small flakes or in large plaques and is profuse. "Glove and stocking" exfoliation occurs and occasionally the nail plates are lost.

The buccal mucosa is usually bright red and the tonsils and uvula are swollen and present red punctae. There is a characteristic strawberry tongue which is at first coated and then red, glazed, and covered with enlarged papillae. The cervical nodes are enlarged.

Subjective symptoms. The patient is acutely ill with sore throat, headache, vomiting, chills and fever (104 to 105°F.) and occasionally convulsions.

Etiology. Hemolytic streptococci.

Histopathology. The microscopic picture is not diagnostic.

Etiology Unknown This condition occurs more commonly in females before the age of forty Associated factors are heredity psychogenic stimuli and endocrine imbalance Use of tobacco may be a factor

Histopathology The microscopic picture is not diagnostic

Diagnostic aids. History and physical examination peripheral vasodilation induced by drugs skin temperature studies.

Relation to systemic disease The condition is associated with scleroderma other collagen diseases, emotional tension and hereditary vascular defects.

Differential diagnosis Thromboangiitis obliterans arteriosclerotic gangrene

Therapy Vasodilator drugs may be of value Physiotherapy rest restriction of the use of tobacco avoidance of cold and sympathectomy

Rosacea

Synonym Rum blossom rum nose

Sites of predilection Nose and cheeks

Objective symptoms The condition begins insidiously as ill-defined bright red transient areas involving the nose and the contiguous portions of the cheeks This transient hyperemia may last for a few days and disappear completely The lesions recur frequently



Fig 43 Rosacea

The hyperemia eventually becomes persistent and the involved areas are dull red to bright red Small dilated blood vessels are present over the alae of the nose and the flush areas of the cheeks. The affected skin is comparatively cool

The ultimate picture known as *rhinophyma* is one of tissue proliferation The skin of the nose and the nasolabial folds become thickened with dilated follicles over the surface Dilated and tortuous blood vessels are also present on the surface The nose becomes bulbous in appearance

Follicular papules and pustules frequently occur in any of the stages previously described. Because of sebaceous hyperactivity the skin surface is exceptionally oily Seborrheic dermatitis is frequently present

Subjective symptoms Slight itching Emotional imbalance because of the disfigured appearance

Etiology Dietary indiscretions, alcoholism, emotional tension and foci of infection are commonly incriminated as causative factors.

Histopathology There is hypertrophy of sebaceous glands. A round-cell and plasma-cell infiltrate occurs in the cutis. Occasionally a tuberculoid architecture is seen in chronic cases.

Diagnostic aids History and physical examination

Relation to systemic disease Achlorhydria hormonal imbalance emotional instability alcoholism

Differential diagnosis Eczema tuberculosis cutis acne vulgaris bromide acne lupus erythematosus.

Therapy Correction of the abnormal physical state Avoidance of alcohol coffee and other stimulants. Sedation the local use of colloidal sulfur lotions, systemic antibiotic therapy and dietary restriction. X-ray therapy is of little value The dilated vessels may be obliterated with high frequency current

Rubeola

Synonym Measles red measles.

Sites of predilection Generalized

Objective symptoms After an incubation period of

ing the forehead and scalp is called *scleroderma en coup de sabre*

Diffuse scleroderma may begin as areas of infiltration or edema but, when fully developed present large confluent areas involving a portion of an extremity an entire extremity the trunk, or the entire body The skin is like leather inflexible, yellowish, whitish, or waxy in appearance and there is loss of the normal topography In advanced cases there is restriction of joint movement diminution of thoracic excursion, loss of facial expression, inability to open the mouth, and inability to chew food. Muscular atrophy may develop and ulcerations occur

Acrosclerosis is a syndrome which combines the features of scleroderma and Raynaud s disease The fingers become fixed (claw like) and the skin becomes hidebound This is called *sclerodactylia* There is intermittent blanching of the fingers and occasionally the toes. Eventually the skin of the fingers and hands becomes cyanotic and occasionally ulcerations develop on the distal phalanges. Facial sclerosis is often associated with acrosclerosis and sclerodactylia

Subjective symptoms The extent of the condition in the areas involved determines the subjective symptoms. Stiffness of the extremities inability to move because of the hidebound involvement of the skin over the joint pain dysphagia and hypersensitivity to cold may occur

Etiology Unknown

Histopathology There is atrophy of the epidermis and the collagen fibers are homogeneous and eosinophilic Atrophy of striated muscle fibers and vascular occlusion are present

Diagnostic aids History and physical examination biopsy

Relation to systemic disease Scleroderma is a systemic disease There is decreased peristalsis and rigidity of the esophagus The entire gastrointestinal tract may be involved Lung changes occur The kidneys may be affected, and myocardial damage may develop

Differential diagnosis Vitiligo scars keloids dermatomyositis

Therapy There is no satisfactory treatment Steroids are of little value

THE SEBORRHEA GROUP OF CONDITIONS

Seborrheic dermatitis, seborrhea oleosa seborrhea sicca pityriasis alba rosacea, and acne vulgaris are included in this group Each condition will be discussed under the specific heading.

Seborrhea Oleosa

Synonym Oily skin.

Sites of predilection Scalp face chest and back.

Objective symptoms The skin in the involved areas is excessively oily because of an over-abundant secretion of sebum The hair becomes very oily and sometimes matted. The skin surface is shiny over the face nose and forehead. The follicular orifices over the nose and the nasolabial folds are patulous

Subjective symptoms Embarrassment caused by the cosmetic defect

Etiology The exact cause is unknown At puberty it may be the effect of excessive hormone secretion on sebaceous gland function Dietary indiscretion, with the consumption of a large amount of oily food is undoubtedly a factor in many instances, regardless of age Emotional tension also plays a role The condition is common in adolescence

Histopathology There is hypertrophy of the sebaceous glands but no infiltrate in the cutis. Slight hyperkeratosis is present

Diagnostic aids History and clinical appearance biopsy

Relation to systemic disease Constitutional illnesses such as acromegaly hypothyroidism, and other hormone dysfunctions may be responsible for the production of this condition.

Differential diagnosis The clinical appearance is typical

Therapy The scalp should be shampooed twice each week using a medicated shampoo such as Sebulon Fostex, Capsebon or Domerine. A simple bland shampoo such as Drene dilute tincture of green soap or Breck s is also satisfactory The face may be cleansed with sulfur containing soap or simple bland soaps. One of the colloidal sulfur lotions, such as Kummerfeld or lotio alba is useful

Diagnostic aids. Schultz-Charlton reaction history and physical examination

Relation to systemic disease Complications include mastoiditis, otitis media nephritis, arthritis and toxemias.

Differential diagnosis Rubeola rubella drug eruptions toxic dermatitis erythema scarlatiniforme

Therapy Penicillin sulfonamides immune serum or gamma globulin may be of value

Scleredema

Synonym Scleredema adultorum of Buschke

Sites of predilection Head neck and upper thorax.

Objective symptoms This condition begins with an ill-defined pinkish macular eruption This is followed by spreading induration and swelling of the skin and subcutaneous tissues. The thickening usually begins on the back of the neck and spreads over the scalp face and neck to the upper trunk Although there is thickening and apparent edema the surface does not pit on pressure Gross inflammatory changes are absent and there is no hair loss atrophy or pigmentation The condition occurs primarily in adults.

Subjective symptoms There are usually no sensory changes Some discomfort is experienced because of the swelling

Etiology This condition usually develops following some infectious disease

Histopathology There is noninflammatory swelling of the collagen Mucin is present between the collagen fibers about the vessels and the epidermal appendages

Diagnostic aids Biopsy

Relation to systemic disease Hypoproteinemia hyperlipemia pleural and pericardial effusions may occur Skin involvement i self-limited usually involuting within a year

Differential diagnosis Scleroderma sclerema edema

Therapy None specific This condition is self limited

Sclerema

Synonym Sclerema neonatorum sclerema adiposum

Sites of predilection Generalized except the palms soles and scrotum

Objective symptoms This condition, which usually appears at birth or during the first few weeks of life is most commonly seen in premature infants The skin lesions first appear on the calves or other portions of the lower extremities and rapidly extend upward to involve the entire body with the exception of the palms, soles and scrotum The surface is cold, dry solid, and has a waxy whitish color The induration and rigidity may be severe enough to immobilize the joints and present difficulties in feeding The prognosis is poor except in those cases where the lesions are limited in extent Severe diarrhea dehydration and malnutrition may be associated symptoms

Subjective symptoms Difficulty in moving, inability to eat properly and diarrhea

Etiology Unknown probably defective fat metabolism

Histopathology Fat necrosis and needle-like crystals of fat are present

Diagnostic aids Biopsy

Relation to systemic disease In advanced cases there is probably involvement of the visceral fat as well

Differential diagnosis Scleroderma edema neonatorum scleredema

Therapy Systemic steroid may be of value Patient must be kept in a warm environment

Scleroderma

Synonym Hidebound disease

Sites of predilection May occur at any site

Objective symptoms. The circumscribed or localized type of scleroderma *morphea* develops as one or more discrete or confluent sharply defined, round or oval macular lesions ranging in size from 1 to 10 cm in diameter The surface is whitish or ivory-colored greatly thickened and usually surrounded by a pinkish or violaceous halo The surface may become atrophic or lose its normal topography Small lesions, known as *morphea guttata* may develop These lesions may involute spontaneously

A localized linear form of scleroderma involv



F 44. Seborrheic dermatitis A Extensive lesions on scalp and trunk B Note festoon formation beyond the hair line C Simulating psoriasis D Simulating secondary syphilis E Simulating discoid lupus erythematosus F With secondary pyogenic infection.

Seborrhea Sicca

Synonym Dandruff pityriasis capitis.

Sites of predilection Scalp and eyebrows.

Objective symptoms Scant or profuse dry or oily whitish or yellowish white flaky scales are scattered throughout the hair The scales vary in size from 1 to 3 mm in diameter In severe cases an adherent collection of scale may form about the orifice of the hair follicle The condition varies in severity from a moderate amount of scale to the profuse scaling noted in seborrheic dermatitis

Subjective symptoms None to moderate itching

Etiology Unknown Scaling is a normal physiologic phenomenon however in diseased states the production of scale becomes accelerated

Histopathology Hyperkeratosis and exfoliation

Diagnostic aids Rule out the presence of fungus infections by the use of scrapings and culture.

Relation to systemic disease None usually

Differential diagnosis Psoriasis fungus infections.

Therapy Use Selsun Capsebon Fostex or Domerine shampoo twice weekly Resorcin-salicylic scalp lotion Sebb Nil or similar preparations may be of value

Seborrheic Dermatitis

Synonym None

Sites of predilection Scalp face behind the ears ear canals presternal area interscapular area and pubic area

Objective symptoms In the scalp the lesions may develop as few to numerous partially or well defined discrete or confluent scaly areas. The eruption may involve the entire scalp and extend on the forehead as well defined reddish slightly infiltrated festooned lesions.

The lesion may appear in the external auditory canals a ill defined slightly infiltrated scaly macules which are covered with adherent scale or blood crust Secondary infection may develop with the formation of pus crusts. Occasionally the entire auricle is involved Well defined lichenified infiltrated lesions frequently develop behind the ears. The reddish areas are covered with adherent dry scale and eventually extend into the scalp and onto the back of the neck. Fissures develop in the sulcus between the ears and the scalp The lesions which develop within the ear canal are frequently misdiagnosed as fungus infection

The festooned lesions on the forehead may be pinkish in color or depigmented and are covered with a scant or profuse amount of adherent oily scale Well defined, scaly macular lesions may develop anterior to the ears and in each nasolabial fold On the anterior chest wall or between the scapulas the lesions develop as well defined discrete or confluent pinkish yellow macules covered with an adherent dry scale Similar lesions may develop within the pubic area extending over the genitalia perineum, and perianal area

Annular lesions may form At times the scaling is so profuse that differentiation from psoriasis is difficult The lesions in the scalp may cause alopecia.

Subjective symptoms Moderate to marked itching

Etiology Unknown Contributing factors are emotional tension and dietary indiscretion. The condition has also been associated with debilitating diseases

Histopathology There is slight acanthosis and parakeratosis. Some vascular dilatation is present in the papillary bodies. The picture is not specific

Diagnostic aids History and physical examination biopsy is nonspecific

Relation to systemic disease The condition is frequently associated with emotional tension and occasionally with debilitating diseases.

Differential diagnosis Psoriasis fungus infections lupus erythematosus eczema pityriasis rosea

Therapy An ointment containing 2.5 per cent sulfur and salicylic acid in petrolatum is valuable in local treatment One per cent hydrocortisone ointment and other steroid ointments are also of value If secondary pyogenic infection is present it should be treated with one of the antibiotic ointments. Selsun Capsebon Fostex, or Domerine are of value in seborrheic dermatitis of the scalp

Tattoo Marks

Synonym. None.

Sites of predilection. Intentional tattoo marks are usually produced on the upper extremities or trunk according to the patient's desire. Accidental tattoo marks produced by foreign bodies occur at sites of trauma.

Objective symptoms. The intentional tattoo marks are produced by injections into the skin of various pigments to form patterns such as pictures, roses, names, etc. The colors are blue, red, or green, depending on the type of ink injected. For several weeks after the tattoo has been performed the treated area is crusted, edematous, and erythematous. After the acute inflammatory symptoms subside the pigmentation remains.

Morphine addicts frequently develop bluish spots at the site of injection, caused by the impurities contained in the product they inject. These lesions usually occur on the extremities or sides of the trunk.

Gunpowder or dirt may also be tattooed into the skin and remain as a permanent foreign body.

Subjective symptoms. None.

Histopathology. Biopsy shows the presence of pigment in the cutis and subcutis.

Diagnostic aids. The clinical appearance is characteristic; history is important in accidental cases and in narcotic addiction.

Relation to systemic disease. None except in narcotic addicts.

Differential diagnosis. Clinical appearance is characteristic.

Therapy. The small lesions may be removed surgically. Dermabrasion is of no value.



Fig. 44. Tinea circinata (due to M. canis) caused by contact with an infected cat.

Striae Albicantes

Synonym Striae gravidarum atrophia striae
Sites of predilection Trunk and thighs.
Objective symptoms These lesions may begin as purplish linear irregular or band like streaks Later they appear as white smooth or wrinkled, slightly depressed atrophic scars
Subjective symptoms None
Etiology Lesions result from distention and stretching of the skin associated with pregnancy obesity Cushing's disease and prolonged steroid therapy
Histopathology Fragmentation of elastic tissue and scar formation
Relation to systemic disease Pituitary adenomas, obesity steroid therapy Also seen as a common finding in pregnancy
Diagnostic aids None
Differential diagnosis Clinical picture is characteristic
Therapy None

Syphilis Secondary

Synonym Macular manifestation of secondary syphilis
Sites of predilection Trunk and extremities
Objective symptoms The eruption consists of numerous ill defined nonscaly dull pinkish macules which present a splotchy appearance The lesions are symmetrically distributed and are best seen at a distance of 5 or 6 feet from the patient with the light reflected against the skin at an angle Macular lesions are rarely annular

The chancre or the scar of the initial lesion may still be present Associated with macular syphilid are erosive lesions on the mucous membranes condylomata lata moth-eaten alopecia generalized lymphadenopathy iritis, and other secondary manifestations.
Subjective symptoms Cutaneous lesions seldom provoke any subjective symptoms. Lesions in the mucous membranes may produce discomfort
Etiology *Treponema pallidum* (See the chapter on Venereal Diseases)
Histopathology Basic pathology of all syphilitic lesions is that of a perivascular round cell and plasma cell infiltrate
Diagnostic aids. Demonstration of the *Spirochaeta pallida* on dark field examination A positive dark field may be obtained from macular or papular lesions by abrasion of the lesion to produce a moist surface. Dark field examination may also be performed by gland puncture. Serologic tests for syphilis must be done as part of the diagnostic routine
Relation to systemic disease Syphilis is always a systemic disease.
Differential diagnosis Erythema multiforme pityriasis rosea rubella rubeola dermatitis medicamentosa toxic dermatitis.
Therapy See the chapter on Venereal Diseases

Tar Melanosis

Synonym Melanosis of Riehl poikiloderma of Civatte
Sites of predilection Face forehead, neck, and chest
Objective symptoms The onset is gradual The earliest lesions are erythematous macules with follicular hyperkeratosis and scaling The eventual picture is that of a moderately extensive macular eruption consisting of discrete and confluent well-defined light to dark brown, reticulated lesions The pigmentation is permanent
Subjective symptoms Usually free of subjective symptoms Early in the course there may be slight itching
Etiology Tar melanosis is true contact photosensitization caused by the action of sunlight on acridine anthracene and similar substances in contact with the skin
Histopathology The microscopic picture is not diagnostic
Diagnostic aids History and physical examination
Relation to systemic disease Poikiloderma of Civatte occurs commonly in women at menopause
Differential diagnosis Poikiloderma atrophicans vasculare actinic dermatitis contact dermatitis chloasma
Therapy None of any specific value

Therapy If there is no evidence of secondary pyogenic infection the lesions will usually respond to treatment with sulfur and salicylic acid ointment If secondary pyogenic infection is present one of the antibiotic ointments such as Spectrocin should be used Griseofulvin, administered systemically is of value

Tinea Cruris

Synonym Eczema marginatum jock itch

Sites of predilection. Inner sides of the thighs, buttocks More common in males than females.

Objective symptoms. There is usually one confluent sharply defined reddish macule on the inner aspect of one or both thighs, extending into the groin and involving the scrotum. The eruption frequently extends across the perineum to the buttocks. The areas are moderately infiltrated and scaly The border is slightly elevated. Occasionally the surface is macerated and moist The condition is usually worse in warm weather

Subjective symptoms Moderate to severe itching.

Etiology *Trichophyton mentagrophytes* *Epidermophyton floccosum* or *Trichophyton rubrum* The cutaneous lesions produced by these organisms are similar although the eruption produced by *T rubrum* is the most chronic

Histopathology The fungi may be demonstrated in the stratum corneum by the use of the Hotchkiss-McManus stain.

Diagnostic aids Fungi may be demonstrated by direct examination of scrapings, using the potassium hydroxide method or the ink-potassium hydroxide stain The organism may be identified by culture on Sabouraud's medium.

Relation to systemic disease None

Differential diagnosis Seborrheic dermatitis eczema psoriasis.

Therapy Castellani paint (Carfusin) applied to the lesions twice daily Three to per cent ammoniated mercury ointment containing 1 per cent phenol may be of value Griseofulvin is effective on systemic administration.

Tinea Versicolor

Synonym Pityriasis versicolor

Sites of predilection Chest and back. The lesions



F 46 Tinea versicolor

which rarely involve the face may extend onto the neck, arms, abdomen and thighs.

Objective symptoms. This macular eruption is characterized by the development of discrete and confluent small to large areas which tend to involve the major portion of the chest and back. The lesions are dry well defined, and noninfiltrated. The color may be light tan (fawn colored) pink, brown, or depigmented. In reflected light there is slight apparent elevation of the lesion, and the surface appears to be covered with a slightly wrinkled film. The lesions become more prominent during the sum-

Tinea Circinata

Synonym Ringworm

Sites of predilection Face neck trunk and extremities.

Objective symptoms The lesions are single or multiple well defined round or oval pinkish or reddish scaly macules They vary in size from 1 to 5 cm in diameter and may be discrete or confluent The lesions spread peripherally with a tendency towards central clearing to form annular lesions Concentric rings may develop The advancing peripheral margin may be vesicular or papular Blood crusts may be present on the surface

Subjective symptoms Mild or moderate itching

Etiology This contagious disease is most commonly caused by *Microsporum audouini* (the human type of *Microsporum*) or *Microsporum canis* (the animal type of *Microsporum* which is transmitted to humans from cats, dogs and monkeys)

Histopathology Fungi may be demonstrated in the stratum corneum by the use of the Hotchkiss-McManus stain

Diagnostic aids The causative organism may be demonstrated by the use of the potassium hydroxide method or the ink-potassium hydroxide stain Identity of the specific organism is made by culture on Sabouraud s medium.

Relation to systemic disease None

Differential diagnosis. Seborrheic dermatitis pityriasis rosea psoriasis eczema



Fig 45 Tinea circinata

Vitiligo Leukoderma

Synonym. Vitiligo is idiopathic depigmentation leukoderma is acquired depigmentation These terms may be used synonymously

Sites of predilection. The condition may occur on ny part of the body

Objective symptoms. There are variously sized and variously shaped, discrete and confluent sharply defined areas of total loss of pigment. There is a tendency for the lesions to spread peripherally Hyperpigmentation may develop at the margin between the area of depigmentation and the normal skin. If the condition is persistent the hair in the involved area also loses its pigment. The depigmented area become bright red on slight exposure to sunlight but do not tan. Spontaneous remissions may occur

Subjective symptoms None caused by the cutaneous lesions. The condition may cause emotional imbalance due to the cosmetic defect

Etiology Vitiligo is idiopathic depigmentation. Leukoderma may develop following contact with agerite alba or may follow some inflammatory condition such as psoriasis, herpes zoster and eczema Leukoderma may also be a sequela of exfoliative dermatitis.



F 48. Vitiligo

Histopathology There i absence of melanin in the basal layer

Diagnostic aids History and physical examination.

Relation to systemic disease None

Differential diagnosis Pinta morphea leprosy (macular depigmented lesions)

Therapy 8-Methoxy psoralen and exposure to ultraviolet rays

mer months when the patient is exposed to sunlight. The areas involved by the disease fail to tan on exposure to sunlight.

This is a noncontagious disease. Attempts at experimental inoculation have consistently failed.

Subjective symptoms. None. Some patients complain of mild itching when they sweat profusely.

Etiology. *Malassezia furfur.*

Histopathology. The fungi may be demonstrated in the stratum corneum by use of the Hotchkiss-McManus stain.

Diagnostic aids. The short hyphae and clusters of spores of *M. furfur* may be easily demonstrated by the use of the potassium hydroxide or ink potassium hydroxide method. This organism has not been successfully cultured.

Relation to systemic disease. None.

Differential diagnosis. Chloasma, vitiligo, seborrheic dermatitis, pityriasis rosea.

Therapy. Saturated solution of sodium hyposulfite applied to the involved areas 4 times daily is effective. Selenium sulfide ointment (1 per cent) is an effective preparation.

Trichophytosis Corporis

Synonym. *Trichophyton rubrum* infection.

Sites of predilection. Trunk and extremities.

Objective symptoms. This noncontagious fungus infection may be limited to one or more fingernails or toenails, one or both palms, one or both soles, extensive plaques involving large portions of the trunk, or a single small area involving one buttock, one thigh, etc.

Involvement of the nails produces distortion, increased fragility, pit formation and thickening of the nail plate. If the palms or soles are involved, the lesions are excessively dry, dull red, scantily scaly and fissured. On the trunk or extremities the plaques are sharply defined, dull red, scantily scaly and resemble the lesions of seborrheic dermatitis or psoriasis. Blood crusted excoriations may be present. The sharply defined border may be slightly elevated.

Subjective symptoms. The lesions cause variable itching.

Etiology. *Trichophyton rubrum.*



Fig. 47. Trichophytosis corporis caused by *Trichophyton rubrum.*

Histopathology. The fungus may be demonstrated by the Hotchkiss-McManus stain in the stratum corneum.

Diagnostic aids. Culture on Sabouraud's medium is necessary for identification of the organism. Examination of skin scrapings or particles of nail by use of potassium hydroxide or ink potassium hydroxide stain is an immediate diagnostic measure.

Relation to systemic disease. None.

Differential diagnosis. Eczema, seborrheic dermatitis, psoriasis.

Therapy. This type of fungus infection is treatment resistant. Asterol ointment and tincture and 5 per cent sulfur-salicylic acid ointment may be of value. Griseofulvin is an effective systemic medication.



F 40 Acne keloid

papules or papulopu tules As the acute inflam matory phase subsides the lesions develop into keloid which may remain d screte or become onfluent

Subjectiv symptoms Slight t severe itching

Et ology Ken formation in acne lesions

H st pathology Dense fibrous tissue (keloid) A chronic gra uloma which contains many plasma cell

Diagnost d Biopsy

R lat m t system disease None usually

D ff re tial diagnosis The condition is characteristic

Therapy Roentgen ray may be of some value Liquid nitrogen nd carbon dioxide slush re occasionally of benefit Treatment is generall unsatisfactory

Acn Rosacea

Rosacea has been described in the chapter on Macular Eruptions When the disease is compli cated by the presence of papules or papulopustules it is known a *acne rosacea* Treatment is the same as for rosacea

Acne Vulgaris

Synonym Pimples acne

Sites of predil ct on Face chest and back.

Objecti e sympt ms The primary lesion is a follicular papule papulopu tule or comedo (black head) Secondary lesions are crust excoria tions and scars. The papules vary from red to blue-red in color and are conical or rounded. The individual lesions may be superficial papules or deep nodules (indurated acne) Occa sionally the lesions form subcutaneou burrows filled with thick pus The lesions vary in ize from a few millimeters to 2 or more cm. in diameter The burrow may be 4 or more cm in length.

Scars result from spontaneou rupture self inflicted trauma (picking) surgical procedures or healing of the deep-seated burrowing lesion (acne conglobata) Scars may be shallow and broad, deeply pitted or ha e an overhanging edge Patients usually have more than one t pe of lesion present The involved area are oily Seborrheic dermatitis may be present

Subject symptoms Subjective symptoms are usuall minimal. Itching may be present The larger and cystic lesions are painful

The cosmetic defect caused by acne or its sequelae may produce emotional imbalance.

Etiology The cause of acne is unknown. It is associated with endocrine imbalance and usually begins bout the time of puberty

The role played by the *demodex folliculorum* i obscure Secondary infection with taphylococci is common.

Dietary factors play a role in acne

Histopathology Lymphocytic and pla ma cell infiltration surround a comedo-filled hair follicle Abscesses may form due to secondary infection. Giant cells are occasionally seen

Diagnostic ids Clinical acumen is usually suffi-

Chapter 16

PAPULAR ERUPTIONS

Acanthosis Nigricans

Synonym Keratosis nigricans

Sites of predilection Axillae inframammary areas genitocrural region neck

Objective symptoms Reddish brown to black hyperpigmentation is usually the first sign The areas become lichenified and later develop discrete grouped or confluent soft papillomatous projections and vegetating masses. Loss of scalp hair and eyebrows may be associated Frequently the palms and soles are hyperkeratotic

Subjective symptoms In the adult type with associated visceral malignancy the patient may suffer loss of weight and anorexia

Etiology Acanthosis nigricans is a symptom of chromaffin tissue (adrenal medulla) insufficiency

Histopathology Hyperkeratosis acanthosis and atrophy of the epidermis over the dermal pegs are the chief features. Little or no inflammatory reaction is seen. Hyperpigmentation is present

Diagnostic aids History and physical examination biopsy laboratory studies include basal metabolism roentgen studies, 17 ketosteroids, and electrolyte studies.

Relation to systemic disease Of the adult cases, 92 per cent are associated with abdominal visceral cancer Juvenile acanthosis nigricans is usually associated with obesity and pituitary dysfunction

Differential diagnosis Fox Fordyce disease keratosis follicularis eczematous eruptions of the axillae

Therapy There is no effective specific therapy for the cutaneous lesions. In the adult type operable malignancies should be removed In the juvenile type reduction of weight produces involution of lesions.

Acne Halogen

Synonym Bromide acne iodide acne

Sites of predilection Face chest and back. Lesions often involve the extremities and lower portion of the trunk (acne vulgaris is usually limited to the upper back and chest)

Objective symptoms. Follicular papules papulopustules and pustules develop The condition resembles acne vulgaris The lesions may be brownish and coalesce to form groups with a serpiginous border The inflammatory element may be pronounced

Subjective symptoms Usually none except the psychic effect of the cosmetic defect

Etiology Ingestion of bromides or iodides (frequently contained in commercial headache remedies)

Histopathology Leukocytes, plasma cells and foreign body giant cells form an infiltrate in and about the pilosebaceous apparatu

Diagnostic aids History and physical examination blood bromide determination

Relation to systemic disease The underlying condition which necessitates bromide ingestion

Differential diagnosis Acne vulgaris rosacea

Therapy Discontinue bromide medication Administer large doses of sodium chloride daily Local therapy is of little value

Acne Keloid

Synonym Dermatitis papillaris capillitii folliculitis cheloidalis.

Sites of predilection Back of neck chest and back

Objective symptoms The lesions begin as follicular

Actinomycosis

Synonym. Lumpy jaw.

Sites of predilection. Face and neck.

Objective symptoms. Deep-seated nodules or subcutaneous masses which develop slowly and become soft and fluctuant over a period of several weeks to months. The overlying tissues slough and the ensuing purulent discharge contains small masses called sulfur granules. Sinus tracts and chronic subcutaneous abscesses form.

Subjective symptoms. Local pain.

Etiology. *Actinomyces bovis.*

Histopathology. Fungi can be demonstrated by a biopsy taken near the edge of a lesion. They are surrounded by a zone of polymorphonuclear leukocytic infiltration and, in the periphery, plasma cells, giant cells, and epithelioid cells.

Diagnostic aids. Biopsy; demonstration of the fungus in "sulfur granules" usually found in pus or sputum; culture of the organism on Sabouraud's media. Skin tests are of no value.

Relation to systemic disease. Primary actinomycosis of the skin is rare. Gastrointestinal tract infection is common. Involvement of the lungs is usually caused by extension through tissues or secondary to other visceral infection.

Differential diagnosis. Scrofuloderma, peridontal sinuses, syphilis (gumma), malignancies, other deep mycoses.

Therapy. There is no specific treatment for actinomycosis. Potassium iodide, stilbamidine, penicillin and sulfonamides have been used with varying degrees of success.

Adenoma Sebaceum

Synonym. Bourneville disease, steatadenoma, nevus sebaceus.

Sites of predilection. Symmetrically distributed over cheek and nose.

Objective symptoms. Yellowish to reddish, translucent papules 1 to 4 mm. or larger in diameter. Plaques may occur on the forehead or other areas of the face. Papillomatous growths beneath the nails (Koenen's tumors or subungual fibromas) are common. Telangiectasia may be present. The lesions of the Pringle type are small, pink, soft, and fleshy and are frequently associated with other nevi. Adenoma sebaceum lesions of the Balzar variety are large, pale, firm, and not symmetrically distributed.



Fig. 81. Adenoma sebaceum.

Subjective symptoms. None usually, except the psychic trauma of the cosmetic defect.

Etiology. Congenital.

Histopathology. Hyperplasia and hypertrophy of the sebaceous glands, with vascular dilatation.

Diagnostic aids. History and physical examination; biopsy.

Relation to systemic disease. There are two types of adenoma sebaceum, one of which, the Balzar variety, has no known relationship to systemic disease. The Pringle type is frequently associated with tuberous sclerosis, mental deficiency and epilepsy (the triad known as epiloia), osteoporosis, cerebral calcification, and bilateral renal tumors.

Symptoms of epiloia usually do not become apparent until the child is 6 to 9 years of age.

Differential diagnosis. Acne vulgaris, benign cystic epithelioma, nevi.

Therapy. Destruction of individual lesions by electrodesiccation.

Adenoma Senile Sebaceou

Synonym. Hypertrophic sebaceous gland, senile sebaceous nevus.

Sites of predilection. Face.

Objective symptoms. One or more yellowish flat umbilicated papules, varying from 2 to 3 mm in diameter. The skin is usually oily and there may be associated folliculitis or rosacea.



FIG 50 A Acne with numerous comedones B Pyoderma faciale C Cystic acne D Post acne scar formation. E Acne vulgaris F Pyoderma faciale

cient Biopsy is rarely necessary Cultural studies are indicated if secondary bacterial infection is present

Relation to systemic disease Acne is influenced by endocrine glands Excessive steroid secretion increases severity Constipation fatigue diet and heredity influence the course of the disease

Differential diagnosis Halogen acne papular and pustular secondary syphilis impetigo contagiosa rosacea verruca plana adenoma sebaceum acnitis (tuberculid)

Therapy The treatment of acne may be local systemic dietary or radiation

Local therapy consists of improved hygiene (*washing with soap and warm water 2 or 3 times daily*) and the application of a sulfur or sulfur and resorcin lotion or cream to the lesions (Kummerfeld lotion Resulin lotion Sulforcin lotion) The patient is instructed not to pick or squeeze the lesions. Acne surgery other than expression of comedones, is rarely necessary

Systemic therapy should include elimination of foci of infection regulation of bowel habits, adequate rest and administration of vitamins A and C Hormone therapy should be avoided in the absence of specific indications Broad spectrum antibiotics, in subtherapeutic doses may be of value in selected cases as an adjunctive measure

Dietary restriction should be imposed (see acne instructions)

Fractional x ray therapy is indicated in selected patients X ray therapy should not be used on patients under 18 years of age Ultra violet is occasionally of value and may be given *at any age if properly supervised.*

Differential diagnosis. Plantar warts arsenical keratoses.

Therapy None necessary unless the lesion be comes painful They may be pared with a sharp blade or treated with 10 to 25 per cent salicylic acid plasters. Remove the cause Properly fitting shoes may relieve callosities of the feet

Chloracne

Synonym. Tar acne paraffin acne

Sites of predilection. Arms, legs, face chest and back.

Objective symptoms. Follicular papules, papulopustules and comedo-like lesions, resembling acne vulgaris develop on surfaces which come in contact with oily substances. Comedones oc cur in patches on the extensor surfaces of the upper extremities and are concentrated about the elbows. The lesions are chronically inflamed. The comedones in this condition are hard, kerat tous plugs which are difficult to remove by expression. There may be an associated contact dermatitis of the hands.

Subjective symptoms. Moderate to intense itching

Etiology Industrial handling of tars greases, par ffins, nd oils, with resultant follicular irrita tion and mechanical plugging of the follicular orifices.

Histopathology Infiltration of leukocytes plasma cells, and foreign body giant cells in and about the pilosebaceous apparatus

Diagnostic aids History and physical examination.

Relation t systemic diseases. None usually

Differential diagnosis Acne vulgaris.

Therapy Remove from contact with oil. Use 5 per cent salicylic acid in 65 per cent alcohol locally



Fig 42 Chloracne

Chondrodermatitis Nodularis Chronica Helicis

Synonym. Chronic painful nodule of the ear

Sites of predilection. Rim of the ear

Objective symptoms. Well defined hard round or oval lesion varying in size from 3 to 8 mm. The lesions are usually whitish or yellowish in color with a central crusted depression. Ulcera tions may occur They may be single or multiple and are attached to the underlying cartilage They occur more frequently in men

Subjective symptoms Slight discomfort to severe pain, particularly when the ear is in contact with the pillow when patient is at rest.

Etiology Unknown.

Histopathology Edema collagen degeneration and vascular proliferation in the corium with the inflammatory process involving the cartilage Moderat acanthosis is present

Diagnostic aids Biopsy

Relation to systemic diseases None

Differential diagnosis Epithelioma keratoses tophi of gout

Therapy Excision or destruction of the lesion may be of only temporary value Recurrences are frequent.

Clavus

Synonym. Corn

Sites of predilection. Areas of the foot on which greatest pressure is exerted by shoes such as the dorsal surface of the fifth toe

Objective symptoms One or more small (3 mm to 1 cm) rounded, raised callus-like lesions, which are yellowish-gray in color The lesions appear to be formed of layers of horny material The summit is usually rough

Subjective symptoms Moderate to severe pain

Etiology Chronic intermittent pressure of shoes.

Histopathology Hyperkeratosis.

Diagnostic aids. None usually necessary

Relation to systemic disease None

Differential diagnosis. Callus keratoses

Therapy Surgical removal and use of 20 to 40 per cent salicylic acid plasters offer temporary

Subjective symptoms None

Etiology Unknown

Histopathology Large numbers of normal-appearing mature or nearly mature sebaceous glands

Diagnostic aids Biopsy

Relation to systemic disease None Other senile changes are present

Differential diagnosis Epithelioma seborrheic keratoses

Therapy Excision or destruction by electrodesiccation

Angiokeratoma

Synonym Telangiectatic warts angioma of the scrotum.

Sites of predilection Scrotum extremities

Objective symptoms Few to numerous pin point to split pea sized reddish or purplish warty papules on the extremities (Mibelli type) On the scrotum the lesions appear as purplish papules which may or may not be grossly keratotic (Fordyce type)

Subjective symptoms None

Etiology Unknown

Histopathology Variable chronic infiltrate vascular dilatation and thickening of the stratum corneum

Diagnostic aids History and physical examination biopsy

Relation to systemic disease May be related to chilblains and to hereditary telangiectasia (Osler Rendu)

Differential diagnosis Verruca vulgaris

Therapy Destruction of individual lesions by desiccation or cryotherapy

Blastomycosis

Synonym North American blastomycosis Gilchrist's disease

Sites of predilection Face and upper extremities any area may become involved

Objective symptoms The primary cutaneous lesion is a papulopustule which spreads peripherally forming an elevated plaque The lesions grow slowly and present a verrucous surface which is usually crusted The border of the lesion is smooth purplish red in color and may present numerous tiny abscesses from which the *Blastomyces dermatitidis* may be demonstrated Cutaneous granulomatous lesions may develop along the course of the lymphatics draining the primary affected areas

Subjective symptoms Usually absent but there may be slight pain in areas which are secondarily infected.

Etiology *Blastomyces dermatitidis*

Histopathology Miliary abscesses and a dense infiltrate of leukocytes epithelioid and plasma cells. Giant cells are present and usually contain the organism The *Blastomyces dermatitidis* is a round oval or slightly irregular body with a double-contoured capsule Budding forms are seen but mycelia have not been demonstrated in tissues

Diagnostic aids History and physical examination biopsy culture

Relation to systemic disease Any organ or tissue in the body may be attacked The lungs are affected in over 90 per cent of the cases of systemic disease The kidneys, bone and central nervous system may become involved.

Differential diagnosis Tuberculosis cutis epitheliomas nodular syphiloderm

Therapy Stilbamidine and 2 hydroxystilbamidine are effective Amphotericin and Nystatin are also effective

Callus

Synonym Callosity callositas.

Sites of predilection Palmar and plantar surfaces

Objective symptoms Calluses occur on areas of the body which are subject to chronic intermittent trauma They may develop as an industrial dermatosis among tool handlers musicians, or shoemakers. They are slightly raised whitish or grayish white in color with a smooth hyperkeratotic surface The edges merge gradually into the normal skin

Subjective symptoms None to considerable discomfort

Etiology Chronic intermittent trauma

Histopathology Thickening of the stratum corneum and stratum granulosum.

Diagnostic aids Clinical appearance is characteristic

Relation to systemic disease None

must be removed in order to prevent recurrence of the lesion.

Cyst Traumatic Epithelial

Synonym. Epidermoid cysts.

Sites of predilection. The palmar surfaces and scars.

Objective symptoms. Usually solitary and less than 1 cm. in diameter these subcutaneous noninflamed lesions occur in the palms of mechanics and other individuals whose hands are subjected to trauma. If ruptured, they exude a thick fluid. They may become secondarily infected.

Subjective symptoms. None unless infection is present.

Etiology. Unknown.

Histopathology. Noninflammatory cystic lesion with a wall composed of stratified epithelium with a thick, inner horny layer. No sebaceous gland elements are present since the lesions usually appear on the palms.

Diagnostic aid. Biopsy to differentiate from sebaceous cysts.

Relation to systemic disease. None.

Differential diagnosis. Sebaceous cyst fibroma.

Therapy. Excision or desiccation.

Dermatosis Papulosa Nigra

Synonym. None.

Sites of predilection. Face chiefly about the nose and cheeks.

Objective symptoms. Few to numerous discrete brown to black, flat or slightly rounded lesions measuring from 1 to 5 mm. in diameter. These benign lesions occur only in Negroes.

Subjective symptoms. None.

Etiology. Unknown.

Histopathology. Identical with the changes observed in seborrheic keratoses.

Diagnostic aids. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. Adenoma sebaceum verruca plana juvenalis moles trichoepithelioma.

Therapy. None indicated or necessary. Surgical removal may be followed by keloid formation.

Eczema Papular

Synonym. Papular eczema neurodermatitis atopic dermatitis.

Sites of predilection. Face neck, trunk, and flexural aspects of the extremities.

Objective symptoms. Usually confluent patches of small erythematous papules with discrete lesions noted in the periphery of the ill-defined areas. The individual lesions may develop as follicular papules or be miliary papules not associated with hair follicles. The eruption may be localized or generalized. This type of eczema is usually associated with other forms of the condition. Excoriations are a prominent feature and secondary pyogenic infection frequently occurs.

Subjective symptoms. Itching is moderate to severe.

Etiology. See eczema in the chapter on Macular Eruptions.

Histopathology. See eczema in the chapter on Macular Eruptions.

Diagnostic aids. See eczema in the chapter on Macular Eruptions.

Relation to systemic disease. See eczema in the chapter on Macular Eruptions.

Differential diagnosis. Papular urticaria folliculitis lichen planus.

Therapy. See eczema in the chapter on Macular Eruptions.



Fig. 52a. Squamous cell epithelioma. Diagnosis established by biopsy.

relief Properly fitting shoes may eliminate the lesions.

Cyst Benign Synovial

Synonym Periarticular cyst

Sites of predilection Phalangeal joints

Objective symptoms. One or more rounded papular cystic lesions usually less than 1 cm in diameter The summit is frequently umbilicated The lesions may be smooth and shiny or may have a roughened surface varying from flesh colored to purplish When the lesion is incised a thick viscid fluid exudes. Synovial cysts are more common in women

Subjective symptoms Pain

Etiology Unknown

Histopathology Corium and epidermis are atrophic A degenerative cyst whose wall is composed of flat connective tissue cells

Diagnostic aid None is usually necessary although the lesions frequently resemble verrucae Puncture may help differentiate the cyst from a solid lesion

Relation to systemic disease None usually

Differential diagnosis Verruca vulgaris.

Therapy The lesions are easily emptied by incision and expression of the fluid however when this incision heals the cyst rapidly refills Surgical excision of the lesion is difficult because of the connection with the synovial membrane Conventional x ray therapy (85 to 100 KV) 400 to 600 r in a single dose filtered by 0 5 mm or 1 mm of aluminum has been reported successful Cryotherapy with a carbon dioxide snow pencil or liquid nitrogen has also been reported as successful treatment Local injection of hydrocortisone or prednisolone into the lesion is a valuable therapeutic measure

Cysts Dermoid

Synonym None

Sites of predilection Head and neck generally overlying suture lines of the bones or the branchial arches

Objective symptoms Dermoid cysts are noninflammatory subcutaneous tumors which are not attached to epidermal structures. They vary in size from a few millimeters to several centimeters in diameter

Subjective symptoms Usually none

Etiology Dermoid cysts are congenital in origin and may appear at any time in life

Histopathology The lining of the cyst is stratified squamous epithelium and all dermal elements may be present including sebaceous glands, hair sweat glands, and teeth Sometimes the lesions are teratomas

Diagnostic aids Biopsy

Relation to systemic disease There may be other evidences of faulty development Dermoid cysts may be found in internal organs, chiefly the ovaries and testes.

Differential diagnosis Other tumors of the skin.

Therapy Surgical excision is necessary since squamous cell carcinomatous degeneration frequently occurs

Cyst Sebaceous

Synonym Steatoma wen

Sites of predilection Face scalp back, and scrotum

Objective symptoms These slowly growing benign cystic lesions are attached to the skin but not to the subcutaneous tissues They are usually firm in consistency but may become soft due to secondary infection They are filled with a caseous foul-smelling material The wall of the cyst is a fibrous capsule The lesions may be solitary or multiple and vary from 1 cm to 10 cm in diameter The condition may be associated with acne.

Subjective symptoms Usually none unless the lesions become secondarily infected

Etiology Plug formation in sebaceous duct orifices and hyperactivity of the gland

Histopathology The wall is composed of nonkeratinized epithelial cells. The peripheral layer shows palisading The cysts are filled with amorphous material

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Lipoma fibroma other tumors

Therapy Surgical excision. The entire capsule

Histopathology Differentiated basal cell carcinomas show epithelial structures such as sebaceous glands, apocrine gland hair follicles, etc. The undifferentiated type is characterized by large oval or elongated, deeply staining, basophilic nuclei usually surrounded by a small ill defined zone of cytoplasm. Many basal cell cancers are a mixed type and show both differentiated and undifferentiated types of structures in the same tumor

Diagnostic aids. Biopsy

Relation to systemic disease None

Differential diagnosis. Other types of epithelioma senile and seborrheic keratoses verrucae benign nevi leukoplakia.

Therapy Basal cell epitheliomas may be treated by surgical excision, x-radiation (conventional or Grenz) radium therapy or a combination of surgery and radiation.

A method which has given excellent results consist of excision of the lesion, with electrodesiccation of the base This is followed by a total of 3000 r of conventional x-ray treatment given in divided doses, unfiltered.

These lesions are relatively benign. Because of the mental distress frequently suffered when the patient is told the diagnosis is cancer a careful explanation of the nature of the lesion and the good prognosis attendant on proper therapy is mandatory

Epithelioma Multiple Benign Cystic

Synonyms Multiple benign cystic epithelioma multiple trichoepithelioma

Sites of predilection. Face scalp neck, and chest

Objective symptoms. Few to numerous, rounded translucent sessile papules which are pinkish to bluish-white in color These tumors frequently have a slight central depression The lesions vary in size from 2 to mm. The larger lesion may be telangiectatic.

Subjective symptoms None

Etiology Unknown. There may be a familial tendency



Fig. 84 Epithelioma multiple benign cystic

Histopathology Keratin cysts, intermingled with solid strands or nests of basal cell

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Epithelioma of other types adenoma sebaceum molluscum contagiosum.

Therapy Excision, curettage or desiccation.



Fig. 84a Epithelioma, multiple benign cystic

Epithelioma Basal Cell

Synonym Basal cell cancer rodent ulcer basal cell carcinoma

Sites of predilection Usually the upper portion of the face although basal cell epitheliomas may appear on any part of the body

Objective symptoms These slowly growing malignant tumors first appear as small keratoses or shiny solid whitish or pinkish papules with telangiectasia The lesions may vary from 2 mm to several centimeters in diameter These tumors may remain as intact papules which do not increase in size or after varying periods of several weeks to several months or years, the lesions ulcerate and spread peripherally The borders are rolled pearly and telangiectatic If the central crust is removed by "picking" or other trauma bleeding occurs. Eventually a crust fails to form and a chronic indolent ulcer results.

Subjective symptoms Usually none The area may become tender if ulceration develops. There may be emotional trauma because of the cosmetic defect Occasionally fear of cancer may prevent the patient's seeking treatment or even produce a psychosis

Etiology Unknown Prolonged and repeated exposure to the sun trauma or chronic irritation from other sources are factors associated with the production of basal cell epitheliomas.

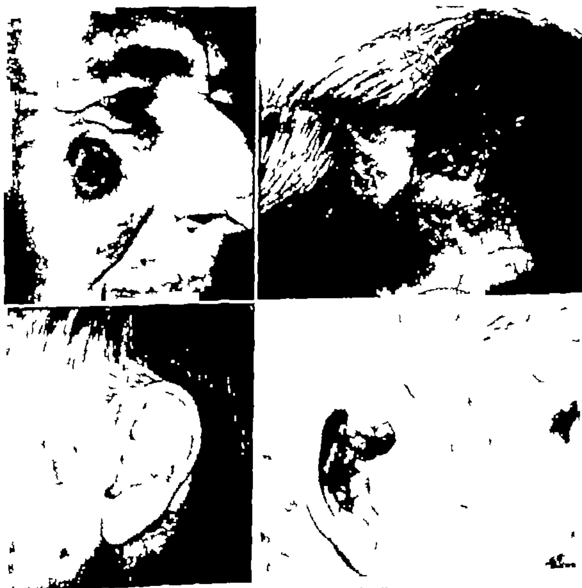


Fig 53 Epithelioma basal cell

Histopathology. Differentiated basal cell carcinomas show epithelial structures such as sebaceous glands, apocrine glands, hair follicles, etc. The undifferentiated type is characterized by large oval or elongated, deeply staining, basophilic nuclei, usually surrounded by a small, ill-defined zone of cytoplasm. Many basal cell cancers are a mixed type and show both differentiated and undifferentiated types of structures in the same tumor.

Diagnostic aids. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. Other types of epitheliomas, senile and seborrheic keratoses, verrucae, benign nevi, leukoplakia.

Therapy. Basal cell epitheliomas may be treated by surgical excision, x-radiation (conventional or Grenz), radium therapy, or a combination of surgery and radiation.

A method which has given excellent results consists of excision of the lesion, with electrodesiccation of the base. This is followed by a total of 3000 r of conventional x-ray treatment given in divided doses, unfiltered.

These lesions are relatively benign. Because of the mental distress frequently suffered when the patient is told the diagnosis is cancer, a careful explanation of the nature of the lesion and the good prognosis attendant on proper therapy is mandatory.

Epithelioma, Multiple Benign Cystic

Synonym. Multiple benign cystic epithelioma, multiple trichoepithelioma.

Sites of predilection. Face, scalp, neck, and chest.

Objective symptoms. Few to numerous rounded, translucent, sessile papules which are pinkish to bluish-white in color. These tumors frequently have a slight central depression. The lesions vary in size from 2 to 5 mm. The larger lesions may be telangiectatic.

Subjective symptoms. None.

Etiology. Unknown. There may be a familial tendency.



Fig. 54. Epithelioma, multiple benign cystic.

Histopathology. Keratin cysts intermingled with solid strands or nests of basal cells.

Diagnostic aids. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. Epithelioma of other types, adenoma sebaceum, molluscum contagiosum.

Therapy. Excision, curettage, or desiccation.



Fig. 54a. Epithelioma, multiple benign cystic.

Epithelioma Squamous Cell

Synonym Prickle cell cancer malignant acanthoma epidermoid carcinoma

Sites of predilection Exposed surfaces of the body Occur frequently on the lower part of the face lower lip or the dorsal surfaces of the hands

Objective symptoms These malignant lesions may begin as small hard whitish or yellowish nodules or may arise from leukoplakic lesions senile keratoses or chronic ulcers The base is firm and usually telangiectatic The lesions grow rapidly in size compared to the growth of a basal cell epithelioma Ulceration may occur and offers a rough index of the degree of malignancy the more highly differentiated tumors usually having an intact surface. The ulcers usually have a wide rolled pearly border although rapidly growing lesions may be fungoid in appearance The lesions vary in size from 1 to 5 cm or more in diameter

Squamous cell cancers of the lower lip may resemble small papillomas with intact surfaces (relatively benign) or begin as fissures which rapidly break down and form early metastases.

Subjective symptoms Little or no pain is present unless the lesion is large or has metastasized.

Etiology Unknown

Histopathology The histologic picture varies with the grade of malignancy In low grade malignancies the degree of anaplasia is low and the

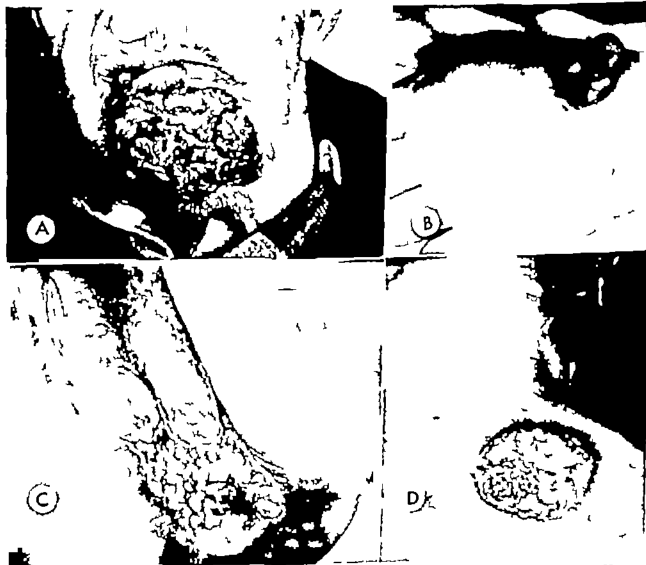


Fig 56 *A* and *B* Epithelioma squamous cell *C* Complicating granuloma [illegible] le *D* Lesion [illegible] 23 year-old girl

cancer cell has little ability to penetrate the corium. As the cancer becomes more malignant, the degree of anaplasia increases (amount of mitoses, abnormal rete cells, and disorderly appearance). In low grade malignancy pearl formation predominates, but in the very malignant form there is complete lack of adhesiveness and an increase in the ability of cells to penetrate the corium.

Diagnostic aids. Biopsy findings are characteristic.

Relation to systemic disease. None unless the lesion has metastasized.

Differential diagnosis. Verrucae, pyogenic granuloma, gumma, tuberculosis cutis, lupus vulgaris, other types of epitheliomas, chronic granulomas.

Therapy. Wide excision of the lesion, followed by radiation therapy. These lesions are radio-sensitive but require a somewhat higher dose of x-ray than do basal cell epitheliomas.

Erythema Multiforme

Synonyms. None.

Sites of predilection. Flexor surfaces of the extremities, palmar and plantar surfaces, lips.

Objective symptoms. Usually numerous, pink to violaceous, nonscaly papules, varying in size from a few millimeters to or more cm. in diameter. The lesions vary in shape from nummular to gyrate. They are well defined and may form annular or iris (target) lesions. The vermilion borders of the lips are usually crusted and edematous. Macules and vesicles may also be present in the same patient. The patient may be seriously ill.

Subjective symptoms. Generalized malaise, sore throat, arthralgias, and a burning sensation in the eyes may be present.

Etiology. Unknown. Erythema multiforme is a cutaneous reaction to chronic foci of infection, drug ingestion or injection, or immunization. There is a seasonal type (Hebra).

Histopathology. See erythema multiforme in the chapter on Macular Eruptions.

Diagnostic aids. History and physical examination, hemogram.

Relation to systemic disease. Erythema multiforme is a systemic disease, the diagnosis usually being made by observation of the cutaneous symptoms. The patient may be seriously ill.

Differential diagnosis. Chronic urticaria, secondary syphilis, drug reaction.

Therapy. See erythema multiforme in the chapter on Macular Eruptions.

Erythema Nodosum

Synonym. Dermatitis contusiformis.

Sites of predilection. Extensor surfaces of the legs and thighs, although occasionally lesions appear on the upper extremities.

Objective symptoms. The lesions may be few to numerous, varying in size usually from 1 to 3 cm. in diameter. They are pink to bluish-red in color and appear in crops. They are usually firm. Lesions may become soft, but do not ulcerate. Hyperpigmentation may follow involution of the lesions. Recurrences are frequent.

Subjective symptoms. The lesions are tender and painful. There may be generalized malaise, arthralgia, or gastrointestinal symptoms.

Etiology. Unknown. Erythema nodosum has been regarded as a variant of erythema multiforme. It may be associated with chronic foci of infection, rheumatic fever, tuberculosis, syphilis, chronic granulomas, and drug sensitivity.

Histopathology. Vascular dilatation, edema of the cutis, perivascular round cell infiltration, and thrombosis of small blood vessels.

Diagnostic aids. History and physical examination, biopsy, hemogram.

Relation to systemic disease. Erythema nodosum may be associated with chronic tonsillitis, gastrointestinal disturbances, genitourinary disturbances, rheumatic fever, tuberculosis, etc.

Differential diagnosis. Erythema induratum, gumma, chronic nonsuppurative panniculitis, periostitis.

Therapy. Eliminate foci of infection. Sodium salicylate, enteric-coated, 0.6 gm. 3 or 4 times daily may help. Systemic steroid therapy will cause the lesions to disappear, but when the drug is discontinued, the lesions usually recur. Broad spectrum antibiotic therapy, including the tetracyclines, erythromycin, and triacetyloleandomycin, 250 mg. 4 times daily, frequently helps to control the condition.



FIG 56 Fibroma colli

Cure is achieved only when the cause is determined and eliminated

Fibroma Colli

Synonym Skin tags cutaneous tags of the neck

Sites of predilection Neck and upper chest wall in middle-aged and elderly people

Objective symptoms Few to numerous small (1 to 3 mm) flesh-colored or dark brown papules or filiform tags The lesions are discrete and may become secondarily infected.

Subjective symptoms None

Etiology Unknown probably associated with senescent changes in the skin

Histopathology Slight acanthosis thinning of the horny layer and a spongy areolar arrangement of the fibers of the corium There is loss of elastic tissue

Diagnostic aids Biopsy

Relation to systemic disease None has been established

Differential diagnosis Nevi seborrheic keratoses verrucae

Therapy Excision desiccation or application of liquid nitrogen

Fibroma Durum

Synonym Dermatofibroma lenticulare histiocytoma fibroma simplex sclerosing hemangioma

Sites of predilection Distal portions of the extremities, although they may appear anywhere

Objective symptoms The lesions, which occur most frequently in women are usually single and appear as firm dull reddish to purplish nodules 3 mm to 1 cm in diameter These benign lesions are hard fixed in the skin sharply defined and slowly growing The nodules are attached to the skin but not to the underlying subcutaneous tissue

Subjective symptoms Usually none

Etiology Unknown

Histopathology The circumscribed tumor is composed of mature fibrous tissue The nuclei are small

Diagnostic aid Biopsy

Relation to systemic disease None has been established

Differential diagnosis Keloid nevus wart

Therapy Excision

Glomus Tumor

Synonym None

Sites of predilection Extremities, usually under nails.

Objective symptoms The lesion are single soft small bluish or bluish red tumors, 2 mm to 1 cm in diameter The lesions never become very large Occasionally multiple lesion develop

Subjective symptoms Moderate to intense pain

Etiology Unknown.

Histopathology The lesion is composed of an arterial element Sucquet Hoyer canals, and a venous element The canal is lined by endothelium surrounded by a thick mantle of glomus cells which resemble epithelioid cells, and have an eosinophilic cytoplasm and large oval nuclei. A rich network of nonmyelinated nerve fibrils can be demonstrated by special stain

Diagnostic aid Biopsy

Relation to systemic disease None usually but may be associated with hypoplasia and osteoporosis of the bones of the forearm

Differential diagnosis. Neuroma angiosarcoma verrucae

Therapy Surgical excision

Gout

Synonym None

Sites of predilection Rim of the external ear fingers, and toes

Objective symptoms Deposits of uric acid and urates under the skin are known as *tophi* These papular lesions have smooth surfaces and are usually less than 1 cm. in size but may grow to or more cm in diameter They are whitish or cream-colored When ruptured the contents are gritty and whitish (uric acid and urates)

Subjective symptoms Pain in the lesions as well generalized symptoms.

Etiology Faulty uric acid metabolism

Histopathology A foreign body reaction with a *sizable number of foreign body giant cells and* closely packed, needle-shaped crystals of sodium biurate

Diagnostic aid Uric acid hemoconcentration urinalysis history and physical examination biopsy of lesions

Relation to systemic disease Gout is a systemic disease

Differential diagnosis Basal cell epithelioma chronic painful nodule of the ear

Therapy Diet low in purine colchicine systemic steroid therapy in short courses Benemid and Butazolidin are valuable adjunct

Granuloma Annulare

Synonym. Ringed eruption lichen annularis.

Sites of predilection Usually the distal portions of the extremities, although any area may be involved

Objective symptoms The primary lesion is a whitish, bluish or pinkish, deep-seated papule or ring of closely grouped papules which usually form an annular or serpiginous lesion. The lesions are firm and nonscaly with elevated borders.

The lesions do not tend to involute spontaneously and in long standing lesions, the central portion may be atrophic Scarred plaques of lesions may form

The condition commonly occurs in young children but lesions may appear at any age

Subjective symptoms None.

Etiology Unknown

Histopathology Moderately well-defined area of altered collagen (necrobiosis) surrounded by epithelioid cell which may form palisading Many small mononuclear cell form the perivascular infiltrate and also surround the epithelioid cell

Diagnostic aids. Biopsy

Relation to systemic disease None has been established.

Differential diagnosis. Epithelioma lichen planus xanthoma tuberosum

Therapy Nonspecific Surgical excision of a portion of the lesion for biopsy may result in complete involution. Roentgen rays are of value Cryotherapy is of value in some cases

Granuloma Fungoides

Synonym Mycosis fungoides.

Sites of predilection Generalized

Objective symptoms Granuloma fungoides is a systemic lymphoma which has three stages the eczematous or premycotic stage the infiltrated stage and the tumor stage

1 The eczematous or premycotic stage may resemble eczema, parapsoriasis en plaque psoriasis or exfoliative dermatitis. The lesions are multiform and are not characteristic This stage may last several years.

2 During the infiltrative stage the lesions become more well defined and elevated with circinate or gyrate lesions which form plaques These lesions occasionally ulcerate

3 The period of tumor formation gradually follows within several months after the infiltrative stage Tumors occasionally arise from normal skin but more frequently from previously involved areas. No area of the body is exempted Tumors may involute spontaneously or may ulcerate When the face is involved a leonine expression similar to that seen in lepromatous leprosy may be noted

The prognosis is poor

Subjective symptoms During the early stages, itching is a prominent feature

Etiology Unknown

Histopathology In the eczematous phase the changes are not characteristic In the infiltrative and tumor phases there is a polymorphous infiltrate with invasion of the epidermis. Epidermal abscesses (Pautrier) develop

Diagnostic aids Biopsy history and physical examination

Relation to systemic disease Granuloma fungoides is a systemic lymphoma with fatal termination although the patient may live for many years after the diagnosis is made

Differential diagnosis Other lymphomas late cutaneous syphilis leprosy

Therapy Supportive measures Roentgen rays, Grenz rays and cathode rays cause temporary involution of the cutaneous lesions. Nitrogen mustard and triethylene melamine may be of benefit in producing partial or temporary remission of symptoms Systemic steroid therapy may be of value.

Granuloma Pyogenic

Synonym Granuloma pyogenicum botryomycosis hominis telangiectatic granuloma

Sites of predilection Usually the face or extremities. Any area may be involved

Objective symptoms These papular lesions are single small pedunculated or sessile vascular granulomas occurring at the sites of injuries. They frequently complicate an ingrown toenail or a dental sinus tract The lesions vary in size from 2 mm to 1 cm. in diameter and are bluish red to black in color They may be covered with a thin blood or serous crust and tend to bleed profusely on slight trauma



Fig 57 Granuloma pyogenicum

Subjective symptoms. The lesions are tender but not usually painful

Etiology Unknown It is thought that pyogenic bacteria or a virus may be responsible

Histopathology The tumor is composed of numerous, newly formed and dilated capillaries with a variable amount of endothelial proliferation Inflammatory elements are present

Diagnostic aids Biopsy

Relation to systemic disease None has been established

Differential diagnosis Verrucae malignant melanoma nevus foreign body granuloma

Therapy Excision or destruction of the lesion by electrodesiccation Conventional roentgen therapy may be of benefit

Hemangioma

Synonym Nevus vasculosus vascular nevus strawberry nevus birthmark

Sites of predilection Face head neck trunk or extremities

Objective symptoms The lesions of simple hemangiomas are present at birth or begin shortly thereafter They are round or irregular slightly to moderately raised bright reddish to purplish papules which vary in size from 2 mm to several centimeters in diameter The lesions may be superficial or extend into the deeper tissues. They may pulsate They are usually single but





F 49 Hemangioma on scalp and extensor surface of leg

may be multiple Ulceration is followed by formation of whitish scar Simple hemangiomas tend t involute spontaneously

The avernous type which r connected to the deep enous channels, a soft doughy tumor which has smooth, light to dark blue surface nd measures 1 t 3 cm Simple hemangioma may be present on the surface of these deeper lesions

Subject symptoms. None usually although pain may occur with ulceration

Etiology Congenital

Histopathology There is dilatation of pre-existing vessels nd proliferation of new vessels. There is usually some connective tissue proliferation

Diagnostic aids. History and physical examination biopsy

Relation to systemic disease None usually Extensive lesions may be associated with Sturge-Weber syndrome

Differential diagnosis Pyogenic granuloma

Therapy Superficial lesions respond well to carbon dioxide snow applied with pressure Sclerosing solutions may be injected into the deeper lesions. Radium and x ray (conventional or Grenz) are useful in experienced hands. Surgical excision of cavernous lesions may be necessary Many simple hemangiomas involute spontaneously

Horn Cutaneou

Synonym. Cornu cutaneum

Sites of predilection Face and hand Other areas may be involved

Objective symptoms. Usually single these lesions are composed of horny material, projecting a few millimeters to several centimeters above the skin. The noninflamed base may have a rolled edge and range from a few millimeters to 1.5 cm in diameter The lesions vary from flesh-color to dark brown or black, and may be smooth, curved or twisted. They may be of such size as to suggest an animal horn, although they are not connected to underlying bony structures The bases usually undergo malignant degeneration to squamous cell carcinomas.

These lesions are usually associated with other senile changes in the skin, such as senile



F 50 Cornu cutaneum

keratoses, and are seen frequently in "farmer sailor skin

Subjective symptoms Usually none except the cosmetic defect

Etiology Unknown

Histopathology Hyperkeratosis with papillomatous changes of the rete In the rete the cells are disorderly and show early signs of dyskeratosis Low-grade squamous cell epithelioma may be present

Diagnostic aids Biopsy

Relation to systemic disease None usually

Differential diagnosis Verrucae

Therapy Excision or electrodesiccation

Ichthyosis Hystrix

Synonym Nevus unius lateris

Sites of predilection Trunk and extremities.

Objective symptoms This is a peculiar type of papular nevus which frequently assumes a linear arrangement and may involve large areas of the body The lesions are groups of thick pointed or spine-like projections. The color varies from dark gray to brown The condition is noninflammatory Other congenital ectodermal defects such as friable nails and dry lustreless hair may be present

Subjective symptoms None

Etiology Congenital

Histopathology A variable amount of acanthosis and hyperkeratosis

Diagnostic aid Biopsy

Relation to systemic disease None Other congenital ectodermal defects may be present

Differential diagnosis Nevus unius lateris ichthyosis.

Therapy In extensive lesions treatment is of little avail Smaller lesions may be surgically excised.

Keloid

Synonym. Cheloid.

Sites of predilection Any area of the body

Objective symptoms. Keloids are hard, variously sized (1 to 10 cm) fibrous growths which develop in connective tissue at the site of trauma or in a scar The lesions, which occur most frequently in Negroes, develop out of all proportion to the original injury inflicted The lesions are whitish orange or reddish They usually have smooth flat surfaces but may be pedunculated Ulceration rarely occurs.

Subjective symptoms. Usually none although the lesions may itch or be painful

Etiology Unknown The tendency toward keloid formation is probably inherited It is an individual tissue reaction to trauma

Histopathology Large homogeneous, connective tissue fibers, interspersed with connective tissue cells with small intensely staining nuclei The epidermis is atrophic

Diagnostic aids Biopsy history and physical examination

Relation to systemic disease None has been established



Fig 60 Keloids following slight scratch by a ba pi and f ll w ng a knife wo in l

Differential diagnosis. Epithelioma xanthoma gumma

Therapy Roentgen rays are frequently effective in the treatment of keloids which are less than 6 months old. Excision of the lesion is frequently followed by regrowth. If the lesion is excised the procedure should be followed within a few weeks by roentgen therapy

Keratoacanthoma

Synonym Self-healing epithelioma molluscum sebaceum

Sites of predilection Face and hands.

Objective symptoms Usually a single rapidly growing, hemispherical flesh-colored firm papule There is a central depression filled with a verrucous crust The surface may be telangiectatic but the base is not inflammatory The lesions vary in size from 2 mm. to 1 or more cm. in diameter Many of these lesions tend to undergo spontaneous involution.

Subjective symptoms. Usually none

Etiology Unknown.

Histopathology A large central keratotic plug, with some parakeratosis and surrounded by hyperacanthotic rete which shows a minimum of individual cell keratinization and anaplasia. Acute or subacute inflammation is present

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis. Squamous cell epithelioma.

Therapy Excision



Fig. 61 Keratoacanthoma

Keratosis Follicularis

Synonym Darier's disease White's disease

Sites of predilection Head, face trunk, and extremities.

Objective symptoms. The lesions begin as tiny flesh colored or grayish-brown, follicular papules which are hard and conical and become topped with an oily crust Removal of the crust reveals a small depression on the top of the papule The lesions increase in size, become darker in color and coalesce into greasy plaques Small dark brown tumors and papillomatous growths gradually form and the lesions frequently emit an offensive odor Unilateral linear lesions may occur

Subjective symptoms. None

Etiology Unknown. The condition has been associated with vitamin A deficiency

Histopathology Flattening or elongation of the papillary bodies with acanthosis. Lacunae form between the basal and prickle cell layers or in the lower portion of the prickle cell layer The cells bordering on the lacunae become partially



Fig. 62 Keratosis follicularis

keratinized and are called corps ronds De- generative cells called grains are seen in the lacunae

Diagnostic aids Biopsy history and physical examination

Relation to systemic disease None has been definitely established

Differential diagnosis Acanthosis nigricans pityriasis rubra pilaris follicular papular syphilid

Therapy Vitamin A 100 000 to 200 000 units daily Lubricating antipruritics such as 0 1 to 0 3 per cent menthol in Shepard s lotion or olive oil may offer symptomatic relief

Keratosis Pilaris

Synonym Keratosis suprafollicularis

Sites of predilection Extremities and trunk

Objective symptoms There are numerous tiny discrete keratotic follicular papules pinkish to grayish in color topped by a tiny scale and frequently pierced by a hair Occasionally a hair may be found curled inside the papule The areas resemble *cutis anserina or goose flesh* and produce a feeling suggestive of the surface of a nutmeg grater The condition is associated with dry skin and is most pronounced during the cold months of the year

Subjective symptoms Mild itching especially after bathing in soapy water

Etiology Associated with ichthyosis or vitamin A deficiency

Histopathology Follicular hyperkeratosis with a mild inflammatory reaction in the cutis

Diagnostic aids Biopsy

Relation to systemic disease None has been established

Differential diagnosis Keratosis follicularis ichthyosis pityriasis rubra pilaris lichen nitidus lichen spinulosus

Therapy Avoid exposure to cold use 3 to 5 per cent salicylic acid in an oily ointment base Therapy is palliative and not curative

Keratosis Seborrheic

Synonym Senile wart seborrheic wart acanthotic nevus.

Sites of predilection Face neck, trunk and upper extremities.



Fig 63 Seborrheic keratoses

Objective symptoms These benign slowly growing lesions appear during or after the fourth decade of life as few to numerous, slightly raised, superficial papules which vary from flesh-colored to dark brown or black They vary in size from 2 mm to 2 or more cm in diameter and may be only *slightly raised and flat or verrucous* in appearance with a heavily piled up greasy scale There is usually no inflammatory reaction about the base of the lesion

Subjective symptoms None except for the cosmetic defect

Etiology Unknown Seborrheic keratoses are epithelial nevi which appear late in life

Histopathology Keratinous cysts, which are not related to hair follicle or sebaceous gland invaginate the epidermis. There is *little or no inflammatory reaction* in the cutis but marked melanin production by the basal cells. This is a superficial lesion which primarily involves the epidermis.

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Verrucae nevi senile keratoses epithelioma

Therapy The lesions are easily removed by light electrodesiccation liquid *nitrogen or curettage*

Keratosis Senile

Synonym Senile keratoma

Sites of predilection Face neck ears and dorsa *of the hands.*

Objective symptoms. These premalignant lesions appear in elderly people and are frequently associated with other senescent changes, including hyperpigmentation and excessive dryness. The lesions vary in size from 2 mm. to 1 or more cm. in diameter and are characterized by an adherent dry scale removal of which causes bleeding. The lesions may develop superficial ulcerations.

Subjective symptoms. None.

Etiology. Unknown.

Histopathology. The histopathologic picture varies from benign acanthosis and hyperkeratosis to epithelioma in situ.

Diagnostic aid. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. Seborrheic keratosis, epithelioma.

Therapy. Surgical removal or destruction by electrodesiccation. Roentgen therapy should be used with caution because of the similarity of the histopathologic changes of these lesions to the changes seen in roentgen dermatitis.

Larva Migrans

Synonym. Creeping eruption, myiasis linearis.

Sites of predilection. Palms, soles, buttocks, genitalia, or other areas.

Objective symptoms. This condition first appears as a small papule at the site of infestation. A thin, red, tortuous line extends from the papule, marking the line of migration of the larva in its burrow. The larva may remain quiescent for varying periods up to several weeks, although the usual rate of migration is 2 to 6 cm. daily. Secondary infection is not uncommon.



Fig. 84. Larva migrans.

Subjective symptoms. Itching is moderate to intense.

Etiology. Larvae of the feline and canine hookworm *Ancylostoma braziliense* enter the skin from soil contaminated by animal excreta. Larvae of the *Gastrophilus* have also been reported as causative organisms.

The condition is common in the Southeastern United States but does not occur in the Middle and North Atlantic states except in persons who have visited the South.

Histopathology. It is difficult to recover the larvae in a biopsy specimen. Changes in the burrow wall are not characteristic.

Diagnostic aids. The clinical picture is characteristic.

Relation to systemic disease. Eosinophilia may be present in long-standing cases. Systemic disease does not follow cutaneous infection.

Differential diagnosis. The condition is characteristic.

Therapy. The actively spreading edge of the burrow and surrounding area about 3 cm. in diameter is frozen with liquid nitrogen, ethyl chloride, solid carbon dioxide, or one of the Freon sprays.

Leprosy (Lepromatous Type)

Synonym. Hansen's disease.

Sites of predilection. Face, trunk, and extremities.

Objective symptoms. Lepromatous leprosy may occur independent of or simultaneously with tuberculoid leprosy. The lesions may at first be ill defined, light yellowish-brown infiltrations. These gradually become more well defined, darker in color, and of firm consistency. They may be discrete or confluent. The facial features may be deformed by numerous nodules which give rise to the "leonine facies." Nodules may involute spontaneously or may form plaques and ulcerate.

For more details see leprosy in the chapter on Macular Eruptions.

Subjective symptoms. See chapter on Macular eruptions.

Etiology. *Mycobacterium leprae.*

Histopathology. See leprosy in the chapter on Macular Eruptions.

Diagnostic aids Biopsy scraping lepromin test

Relation to systemic disease Leprosy is a systemic disease

Differential diagnosis Sarcoid late cutaneous syphilis cutaneous tuberculosis

Therapy See leprosy in the chapter on Macular Eruptions

Lichen Nitidus

Synonym None

Sites of predilection Flexor aspects of the wrists and forearms lower abdomen the inner surfaces of the thighs and the penis

Objective symptoms The lesions are small flat topped flesh-colored or pinkish discrete round or angular papules Linear groups may occur

The condition is chronic and subject to spontaneous remissions and exacerbations.

Subjective symptoms None

Etiology Unknown

Histopathology Resembles lichen planus. Sharply defined infiltrate of lymphocytes, epithelioid cells and giant cells, limited to the papillary layer of the cutis.

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Flat warts lichen planus

Therapy No method of treatment is effective

Lichen Planus

Synonym Lichen ruber planus.

Sites of predilection Flexor surfaces of the upper extremities, trunk buccal mucosa and male genitalia The lower extremities are frequently involved

Objective symptoms The characteristic lesions are



FIG 63 Lichen planus A Reticulated leukoplakia B Umbilicated papules on the [illegible] C Annular papules

discrete flat, angular or polygonal, violaceous papules which are shiny in reflected light and vary from 1 to 4 mm in diameter There is a tendency to central umbilication. Lines or streaks (Wickham's striae) may be observed. There is a scant adherent scale. The lesion may be annular and tend to form linear groups (Koebner phenomenon) or confluent areas.

The onset may be acute with a widespread eruption, the individual lesions of which are reddish in color or lichen planus may be of the chronic localized variety in which one or two areas of the body are involved with the typical angular violaceous flat-topped papules.

The lesions may be atrophic and whitish or ivory in color (*atrophic lichen planus*) On the lower extremities the lesions become large, hyperpigmented, and verrucous (*hypertrophic or verrucous lichen planus*) The characteristic papules are usually seen in the periphery of these hypertrophic lesions

On the buccal surface and tongue the lesions appear as a retiform leukoplakia or sharply defined, white streaks.

Subjective symptoms. Moderate to severe itching.

Etiology Unknown. Chronic emotional tension may be associated.

Histopathology The microscopic picture is diagnostic There is moderate hyperkeratosis and irregular acanthosis thickening of the granular layer and liquefaction of the basal layer The lymphocytic infiltrate is limited sharply to the upper cutis The mucous membrane changes are similar to those seen in cutaneous lesions.

Diagnostic aids History and physical examination biopsy

Relation to systemic disease Associated with emotional instability

Differential diagnosis Papular secondary syphilis psoriasis erythema multiforme The acute forms may be mistaken for papular pityriasis rosea or eczematous eruptions

Therapy There is no specific treatment for lichen planus Emotional factors should be controlled. Tranquilizers or sedatives are good adjunctive therapy Local antipruritics may be of value Intramuscular injections of bismuth subsalicylate or vitamin B_{12} may be of value Butrimate tablets may be used

Lichen Sclerosus et Atrophicus

Synonym. Lichen albus white spot disease

Sites of predilection Trunk and genitalia. Any part of the body may be involved. The condition occurs more commonly in women.

Objective symptoms This chronic condition begins as angular flat whitish papules which become shiny flat atrophic lesions, which are usually discrete but may coalesce into large patches. Occasionally a pinkish halo is noted around the lesions. Keratinous plugging of the follicular orifices is common.

Many patients have genital involvement Occasionally the disease is limited to the genitalia.

It is most common in middle-aged or elderly women. Kraurosis vulvae or balanitis xerotica obliterans may be associated.

Subjective symptoms. Itching, especially when the genitalia are involved.

Etiology Unknown.

Histopathology Keratotic plugging of sweat ducts, liquefaction degeneration of the basal layer homogenization of connective tissue and hyperkeratosis.

Diagnostic aids. Biopsy

Relation to systemic disease None has been established

Differential diagnosis Morphea guttata atrophic lichen planus.

Therapy None is effective

Lichen Spinulosus

Synonym Keratosis follicularis spinulosa lichen pilaris seu spinulosus.

Sites of predilection. Trunk and extremities

Objective symptoms This is an uncommon condition found usually in children. The eruption consists of groups of minute follicular papules from each of which projects a small spine

Subjective symptoms Little or no itching.

Etiology Unknown. Believed to be a vitamin A deficiency

Histopathology The microscopic picture is not diagnostic.

Diagnostic aids History and physical examination.

Relation to systemic disease None has been established

Differential diagnosis Keratosis follicularis keratosis pilaris

Therapy The lesions respond readily to local therapy with keratolytics such as 3 per cent salicylic acid ointment

Lichenoid Eruption of the Axillae

Synonym Fox Fordyce disease

Sites of predilection Axillae pubes and areolae of the nipples

Objective symptoms This rare condition which occurs most commonly in women is characterized by an eruption of persistent nonscaly discrete flat papules, varying in size from 1 to 3 mm in diameter The lesions are located at the orifices of the hair follicles The color varies from pink to violaceous The papules may be closely aggregated but remain discrete Excoriations and blood crusts followed by hyperpigmentation are prominent features.

Subjective symptoms Intense itching

Etiology Unknown

Histopathology Surface epithelium shows changes similar to those seen in chronic lichenoid eczema There is keratotic plugging of the duct orifices and a variable subacute inflammatory reaction about the apocrine glands.

Diagnostic aids Biopsy

Relation to systemic disease None has been established

Differential diagnosis. Contact dermatitis chronic lichenoid eczema (neurodermatitis)

Therapy None effective X ray and topical applications are of doubtful value Systemic hormone therapy may be of benefit Plastic surgery may be necessary to produce relief from symptoms.

Lipoidoses

Diseases of lipoid metabolism with cutaneous manifestations include not only the xanthomas but also some less common entities

Gaucher s disease is characterized by hepatomegaly with retention of cerebrosides, rarefaction of the long bones, and a distinctive brown color of the skin Xanthomatous tumors are not present The condition occurs most commonly in Jews.

Niemann Pick disease occurs chiefly in Jewish infants Hepatosplenomegaly yellow skin, and xanthomatous tumors characterize the condition, which is associated with retention of sphingomyelin This disease is progressive with fatal termination

Von Gierke s disease is characterized by hypercholesteremia and is associated with faulty glycogen metabolism Xanthomatous tumors may be present

Extracellular cholesterosis is a disease of cholesterol metabolism, in which lesions of the skin and mucous membrane form crops of firm, waxy nodules.

In lipoid proteinosis the mucous membrane and tongue become almost board like in hardness and exhibit yellowish plaques.

Lipoma

Synonym. Fatty tumor

Sites of predilection Any area of the body may be involved

Objective symptoms One to numerous variously sized subcutaneous tumors, covered with normal skin may be present The lesions are soft and may be lobulated The lesions are not attached to the skin

Subjective symptoms None

Etiology Unknown

Histopathology Groups of larger than normal fat cells held together by connective-tissue trabeculae to form lobulated masses enclosed within a fibrous capsule

Differential diagnosis Subcutaneous fibromas sebaceous cysts.

Diagnostic aids Biopsy

Relation to systemic disease There is a tendency to familial occurrence

Therapy Excision

Macular Atrophy

Synonym Anetoderma (Schweninger and Buzzi) primary macular atrophy

Sites of predilection Trunk and extremities.

Objective symptoms This rare condition is characterized by the development of few to numerous bluish white small (0 3 to 1 0 cm. in diameter) smooth, soft circumscribed *bladder-like*

pseudotumors. These can be inverted by slight pressure into a hollow in the underlying tissue. The lesions develop slowly and are not associated with any previous inflammatory process.

Subjective symptoms. None.

Etiology Unknown.

Histopathology In the early stages there is a mild inflammatory reaction which eventually tends to disappear with a loss of elastic tissue

Diagnostic aids. History and physical examination biopsy

Relation to systemic disease None has been demonstrated.

Differential diagnosis Other macular atrophic lesions scars.

Therapy None effective

Maduromycosis

Synonym Madura foot mycetoma podelkoma. For details see chapter on Mycology

Melanoma

Synonym Malignant melanoma melano-carcinoma nevocarcinoma malignant mole melanoblastoma.

Sites of predilection Any area of the body may become involved.

Objective symptoms These malignant lesions arise most commonly from black, hairless, slightly elevated moles, although they may develop from any junction nevus. Usually single the lesions are noninflammatory and are brownish-black to black although occasionally they may be flesh-colored.

The lesions tend to grow rapidly and metastasize early If ulceration occurs, death usually ensues within a few months.

Subjective symptoms. Usually none until late in the course of the disease. The patient becomes generally ill and sometimes stuporous.

Etiology Unknown. There is an apparent association with endocrine activity and rapidity of development of melanoma The growth is especially rapid during pregnancy

Histopathology Nevus cells at the dermal-epidermal junction increase in size with an increase in amount of melanin. Mitotic figures are seen, and the cells form an alveolar arrangement as





F 66 Melanoma, malignant

they invade the cutis. The microscopic picture is diagnostic.

Diagnostic aids. Biopsy

Relation to systemic disease Symptoms may be related to organs where the lesions have metastasized Melanomas which occur before puberty have a good prognosis.

Differential diagnosis Pigmented moles pyogenic granulomas.

Therapy Wide excision, including stripping of the regional lymph nodes. Melanomas have a poor prognosis. The lesions are not sensitive to roentgen rays or radium

Miliaria Rubra

Synonym. Prickly heat.

Sites of predilection Trunk, shoulders, neck, and flexures of the extremities.

Usually occurs in hot weather associated

with profuse perspiration The primary lesion is a discrete follicular papule, papulo-vesicle or vesicle which is pink to red in color The lesions occur in patches but do not coalesce

Subjective symptoms Moderate to severe itching

Etiology This condition may be associated with ingested food allergens, or excessive use of citrus fruits.

Histopathology Dilated cystic sweat ducts, with occlusion of the duct orifice

Diagnostic aids The clinical appearance is characteristic

Relation to systemic disease None has been established

Differential diagnosis Folliculitis atopic dermatitis acne vulgaris.

Therapy Heat and excessive perspiration should be avoided Absorbent dusting powders may be of value Calamine lotion may help Avoid ingestion of carbonated beverages and citrus fruits

Milium

Synonym Whiteheads

Sites of predilection Face

Objective symptoms This condition is frequently seen in association with acne vulgaris or oily skin and consists of small discrete solid, whitish cystic lesions filled with inspissated or cheesy material They are not inflammatory

Subjective symptoms None

Etiology Unknown

Histopathology A spherical horny cyst connected to a hair follicle The cyst contents are a homogeneous lipoid substance

Diagnostic aids None usually necessary

Relation to systemic disease None has been established

Differential diagnosis Comedones.

Therapy The top of the lesion may be nicked with a sharp-pointed blade or needle and the contents expressed with a comedo expressor

Milker's Node

Synonym None

Sites of predilection Fingers, wrists, and forearms

Objective symptoms This condition occurs in cattle handlers and dairy workers The primary lesion is a small inflammatory papule, which increases to 1 or 2 cm in diameter within about a week, becoming bluish red and firm. The center of the nodule is umbilicated and may break down. Lymphangitis may occur

Subjective symptoms Pain.

Etiology Virus

Histopathology The microscopic picture is not diagnostic

Diagnostic aids Biopsy

Relation to systemic disease Usually no constitutional symptoms accompany the cutaneous lesions.

Differential diagnosis Verrucae pyogenic granulomas.

Therapy The disease is self limited and tends to clear in 6 to 10 months.

Molluscum Contagiosum

Synonym Fowl pox contagious epithelioma water warts.

Sites of predilection Face trunk genitalia, and extremities

Objective symptoms In this mildly contagious disease there are few to numerous, discrete globular umbilicated, flesh-colored to pinkish papules, which sometimes form groups. The lesions are usually waxy in appearance. The center of the lesion is occupied by a firm caseous mass



Fig 67 Molluscum contagiosum

called the *molluscum body* The individual lesions vary from a few millimeters to 1 cm. in diameter They may become secondarily infected The disease is autoinoculable

Subjective symptoms None to slight itching.

Etiology Virus.

Histopathology The microscopic picture is diagnostic Pear-shaped proliferations of prickle cells in ugmate the cutis. The basal layer and lower layers of the cutis are normal, but the more superficial prickle cells show variously sized vacuoles and eosinophilic hyaline bodies, which may occupy almost the entire cell Basophilic granules are also present at first but these disappear with the formation of a keratin membrane about the periphery

Diagnostic aids. Recovery of the molluscum body by expression biopsy

Relation to systemic disease None

Differential diagnosis. Adenoma sebaceum verruca benign cystic epithelioma pigmented nevus acne vulgaris.

Therapy Curettage electrodesiccation or dichloracetic acid Expression of the molluscum body

Molluscum Fibrosum Gravidarum

Synonym None

Sites of predilection Breasts, neck, and upper chest

Objective symptoms Soft pedunculated fibromas which appear and grow during the latter months of pregnancy and tend to disappear postpartum. The lesions vary from 2 mm. to 6 mm in diameter

Subjective symptoms None

Etiology Unknown associated with pregnancy

Histopathology Well circumscribed fibromas which have a light fibrous capsule

Diagnostic aids. History physical examination, and clinical symptoms biopsy

Relation to systemic disease Growth of the lesion is associated with the latter months of pregnancy

Differential diagnosis Simple fibroma neurofibromatosis fibromatous papilloma

Therapy The lesions frequently disappear almost entirely following delivery

Necrobiosis Lipoidica Diabeticorum

Synonym Dermatitis atrophicans lipoides diabetica.

Sites of predilection Lower extremities Lesions have been reported on the upper extremities and trunk.

Objective symptoms. The primary lesion is a sharply defined, reddish papule which may be slightly scaly and varies from 1 to 3 cm in diameter This lesion slowly spreads peripherally becoming an irregularly round or oval scleroderma like plaque The central portion is depressed and assumes a yellowish tinge The lesion is shiny and translucent. Numerous telangiectatic vessels may be seen in the central portion Ulceration rarely occurs

Subjective symptoms. None

Etiology Unknown.

Histopathology Necrobiotic changes in the collagen fibers, with homogenization and degeneration of the fibers Perivascular infiltrate with obliterative vascular changes. Extracellular lipoid deposits are seen Palisading of epithelioid cell may occur

Diagnostic aids. Biopsy history and physical examination urinalysis blood sugar determinations.

Relation to systemic disease One-third to one-half the cases occur in diabetics.

Differential diagnosis Localized scleroderma localized myxedema xanthoma

Therapy None effective

Neurofibromatosis

Synonym. Von Recklinghausen's disease molluscum fibrosum fibroma

Sites of predilection Trunk to a lesser extent on the head, face and extremities.

Objective symptoms There are numerous soft flesh-colored tumors, which vary from 1 mm. to several centimeters in diameter Smaller lesions may be pressed into the skin as into a hollow Older lesions may be dark brown in color The growths may be sessile or pedunculated. An occasional tumor may be large and pendulous. There may be widespread freckling over the entire skin There are usually one or



Fig 68 Neurofibromatosis

more light brown macules, varying in size from 2 to 10 or more cm in diameter (*café au lait* spots)

Subjective symptoms Usually none except the emotional trauma associated with the cosmetic defect

Etiology Unknown The disease usually appears about the time of puberty or early in adult life but may be present at birth

Histopathology Tumors of nerve sheaths which may arise from connective tissue or the sheath of Schwann They are well circumscribed and have a light fibrous capsule Tumors are composed of wavy fibrils of young collagen which tend to form whorls A variable amount of older collagen is present

Diagnostic aids Biopsy the clinical picture is usually characteristic

Relation to systemic disease There may be developmental defects in the nervous system muscles, and bone Idiocy and epilepsy may be present

Differential diagnosis. Multiple lipomas skin tags multiple sebaceous cysts verrucae leprosy (lepromatous type)

Therapy None effective

Nevoxanthoendothelioma

Synonym Juvenile xanthoma juvenile xanthogranuloma.

Sites of predilection Face scalp and upper part of the trunk

Objective symptoms Usually beginning in the first few weeks of life the lesions consist of one or more groups of yellowish or yellowish-brown papules or nodules. The lesions tend to disappear spontaneously over a prolonged period.

Subjective symptoms None

Etiology Unknown

Histopathology Proliferation of endothelial cells and histiocytes, with endothelial giant cell formation associated with xanthoma cells and Touton giant cells. The microscopic picture is diagnostic

Diagnostic aids Biopsy history and physical examination blood studies.

Relation to systemic disease None The blood lipid values are usually normal

Differential diagnosis Various other nevoid lesions

Therapy None necessary since the lesions tend to disappear spontaneously

Nevus Blue

Synonym Blue nevus of Jadassohn

Sites of predilection Face forearms, and hands

Objective symptoms Well defined firm, round or oval papules varying from 2 to 15 mm. in diameter The lesion is usually dark gray or blue. The lesions begin in infancy or early childhood and do not increase in size

Subjective symptoms None.

Etiology Unknown

Histopathology Histopathologic picture is characteristic Irregular masses of spindle-shaped melanocytes are seen in the lower two-thirds of the cutis

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis. Melanoma Mongolian spots.

Therapy None necessary except for cosmetic effect If the lesion is removed surgically it should be excised widely and deeply because of the possible development of melanosarcoma in incompletely removed lesions.

Nevi Pigmentosus

Synonym Mole pigmented mole benign melanoma

Sites of predilection Any area of the body

Objective symptoms Pigmented nevi are flesh-colored to brown or black circumscribed tumors,



Fig. 89 Nevus with hair

which vary in size from a few millimeters to many centimeters in diameter. Hairs may protrude from the surface of these noninflammatory lesions. They are usually sessile and smooth, but may be verrucous.

Subjective symptoms. None.

Etiology. Congenital.

Histopathology. Nevus cells tend to form alveolar arrangements or strands in the cutis. Increased cellular activity may occur at the dermal-epidermal junction.

Diagnostic aids. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. The lesions are characteristic. If the lesion has grown in size or changed shape biopsy may be indicated to rule out malignant degeneration.

Therapy. None usually necessary. Excision for cosmetic purposes may be desirable. All excised specimens should be examined histologically.

Panniculitis Relapsing Febrile Nodular Non-Suppurative

Synonym. Weber-Christian disease, atrophy of the fatty layer of the skin.

Sites of predilection. Trunk and extremities.

Objective symptoms. In this unusual condition round or irregular subcutaneous nodules, which vary in size up to 10 cm. in diameter gradually form trophic sclerotic plaques. The skin over the lesions is bluish but has normal texture. Occasionally the lesions become cystic, and discharge an oily or fatty fluid.

Subjective symptoms. Fever, malaise, vomiting, and muscular pain.

Etiology. Unknown.

Histopathology. Large numbers of phagocytic cells or histiocytes replace the fat cells. A marked perivascular reaction is present and occasionally foreign body giant cells are seen.

Diagnostic aids. Biopsy.

Relation to systemic disease. None has been established.

Differential diagnosis. Erythema nodosum, erythema induratum, morphea, subcutaneous fat necrosis, paraffinoma.

Therapy. None effective.

Parapsoriasis en *Gouttes*

Synonym. Pityriasis lichenoides chronica, dermatitis psoriasiformis nodularis.

Sites of predilection. Generalized except for hands, face and scalp.

Objective symptoms. The eruption consists of discrete small reddish papules, with varying amount of scale. The condition is chronic.

Subjective symptoms. None.

Etiology. Unknown.

Histopathology. The microscopic picture is not diagnostic.

Diagnostic aids. Biopsy.

Relation to systemic disease. None has been established.

Differential diagnosis. Psoriasis, secondary syphilis, lichen planus.

Therapy. None effective.

Parapsoriasis en *Plaque*

Synonym. None.

Sites of predilection. Trunk and extremities.

Objective symptoms. The primary lesion is a scaly macule which is not infiltrated, but forms plaques, resembling seborrheic dermatitis. The color varies from pinkish-red to brownish. The condition is chronic and does not respond to therapy.

Subjective symptoms. None.

Etiology. Unknown.

Histopathology The microscopic picture is not diagnostic

Diagnostic aids Biopsy

Relation to systemic disease Some authorities state that parapsoriasis *en plaque* occasionally eventuates into granuloma fungoides others believe that the lesions which eventuate into granuloma fungoides have the characteristic histopathologic picture from the beginning

Differential diagnosis Granuloma fungoides psoriasis

Therapy None effective

Parapsoriasis Lichenoides

Synonym Retiform parapsoriasis parakeratosis variegata

Sites of predilection Generalized

Objective symptoms The lesions of this form of parapsoriasis are so extensive that the patient appears to have been covered with a net The primary lesion is a scaly flat topped papule which appears to be intermediate between the lesions of lichen planus and those of psoriasis The condition is chronic and does not respond to therapy

Subjective symptoms None

Etiology Unknown

Histopathology The microscopic picture is not diagnostic

Diagnostic aids Biopsy

Relation to systemic disease None has been established

Differential diagnosis Psoriasis lichen planus

Therapy None effective

Parapsoriasis Varioliformis

Synonym Pityriasis lichenoides et varioliformis acuta (Habermann)

Sites of predilection Generalized

Objective symptoms This condition which is usually self limited is considered a variety of the *en gouttes* form of parapsoriasis The lesions are multiform not infrequently beginning as a vesicular eruption simulating varicella Macules and papules are seen Some of the papules develop necrotic centers resulting in varioliform scars. The course may be acute and self limited or chronic and recurring Generalized lymphadenopathy may occur The disease may occur at any age

Subjective symptoms None to slight itching

Etiology Unknown

Histopathology The microscopic picture is not diagnostic There is a heavy cellular infiltrate in the cutis with a perifollicular foreign-body giant cell reaction

Diagnostic aids Biopsy

Relation to systemic disease In view of the generalized lymphadenopathy and the occasional constitutional symptoms which occur this is probably a systemic illness

Differential diagnosis Pityriasis rosea varicella secondary syphilis

Therapy None effective

Periarteritis Nodosa

Synonym Polyarteritis nodosa

Objective symptoms The cutaneous lesions of periarteritis nodosa are multiform Nodules purpuric lesions urticaria erythema nodosum or erythema multiforme-like lesions may be seen. Tender nodules may be felt along the course of a superficial artery Ulceration may occur

Subjective symptoms Malaise weakness and pain.

Etiology Unknown

Histopathology Inflammatory degeneration of segments of the arterial wall with perivascular leukocytic infiltrate There may be intimal proliferation

Diagnostic aid Biopsy history and physical examination hemograms blood chemistries

Relation to systemic disease Periarteritis nodosa is a systemic disease which often has a fatal outcome The course is marked by irregular fever tachycardia eosinophilia and nephritis The condition may be marked by remissions and exacerbation or may be fulminating Skin lesions may be absent entirely

Differential diagnosis Erythema nodosum urticaria erythema multiforme purpura

Therapy None effective

Pityriasis Rosea

This eruption is usually macular and is described in the chapter on Macular Eruptions Occasionally the early lesions are tiny grouped

papules which eventuate into the characteristic macular lesions, or persist as a papular eruption. For more details see pityriasis rosea in the chapter on Macular Eruptions.

Pityriasis Rubra Pilaris

Synonym. Lichen ruber, lichen ruber acuminatus.

Sites of predilection. Dorsal surfaces of the proximal phalanges of the fingers, extensor surfaces of the wrist and forearms, anterior axillary fold, elbows and knees.

Objective symptoms. The characteristic lesions are hard, dry follicular papules, surrounding a lusterless hairshaft. They are pink to bright red in color. The lesions may coalesce to form exfoliating area.

The face, head, and scalp may develop a scaly eruption which simulates seborrheic dermatitis. The condition may progress to a generalized exfoliative dermatitis.

Subjective symptoms. None to slight itching.

Etiology. Unknown.

Histopathology. Marked follicular hyperkeratosis with a collarette of parakeratosis. Liquefaction of the basal layer. There is an infiltrate of polymorphonuclear leucocytes and lymphocytes. The elastic tissue is intact.

Diagnostic aids. Biopsy.

Relation to systemic disease. No specific relation although late in the course of the disease the patient may become cachectic.

Differential diagnosis. Lichen planus, exfoliative dermatitis, keratosis pilaris, eczema.

Therapy. None effective. Emollient and antipruritics may help.

Porokeratosis

Synonym. Keratoderma eccentrica, hyperkeratosis figurata centrifuga atrophica.

Objective symptoms. This rare disease usually begins as a small wart-like papule which enlarges peripherally, developing an atrophic center and a sharply defined elevated border which is ridged and hyperkeratotic. The ridge is gray or brownish in color and the central portion is usually atrophic.

Subjective symptoms. None.

Etiology. Unknown.

Histopathology. Hyperkeratosis and acanthosis. There is a deep groove filled with a large horny plug containing parakeratotic cells (cornoid lamella). Lymphocytic infiltration is present in the cutis, with vascular dilatation. The microscopic picture is diagnostic.

Diagnostic aids. Biopsy.

Relation to systemic disease. None has been established.

Differential diagnosis. The condition is characteristic.

Therapy. Excision or destruction by electrodesiccation.

Prurigo

The term prurigo has been applied to many different forms of nodular cutaneous affections. As originally described by Hebra, the disease may be mild (prurigo mitis) or severe (prurigo ferox). This rare condition, supposedly limited to adult women, is called prurigo nodularis. All forms of prurigo itch intensely and are characterized by the formation of nodules. These lesions are probably a form of eczema, the nodules resulting from chronic irritation.

Pseudoxanthoma Elasticum

Although this condition begins frequently as a papule, its eventual lesion is a macule and is described fully in the chapter on Macular Eruptions.

Psoriasis

Synonym. Lepra alphos, alphos.

Sites of predilection. Extensor surfaces of the extremities (elbows, knees), the scalp, the trunk and nails. Lesions rarely occur on the face.

Objective symptoms. Psoriasis is a chronic, relapsing disease, the primary lesion of which is a well defined, flat-topped papule or circumscribed plaque. The lesions are pinkish to reddish-brown and are covered with a profuse, dry, silvery white imbricated scale. The individual lesions vary from a few millimeters to 20 cm. or more in diameter. They are round, irregular, or gyrate in shape. The eruption is frequently symmetrically distributed. If the scale is removed, bleeding points are exposed (Auspitz sign). Central involution may occur, forming annular lesions. The nails may become thickened, eroded,



Fig 70 Psoriasis

and brittle and show pit formation Well-defined scaly lesions form in the scalp and are difficult to differentiate from seborrheic dermatitis.

The general health of the individual is usually not affected Small shotty pustules may occur on the palms and soles

Subjective symptoms None except for the cosmetic defect

Etiology Unknown

Histopathology There is an increase in the keratin layer with much parakeratosis long rete pegs with corresponding long narrow dermal pegs, and a thin layer of rete over the dermal pegs. The capillaries in the dermal pegs are dilated long, and rigid There is moderate edema and a mixed subacute infiltrate in the papillary and sub-papillary layers

Diagnostic aids History and physical examination biopsy

Relation to systemic disease Although there is no proof that psoriasis is a systemic disease many investigators feel that it is a metabolic disorder possibly related to dysfunction in phospholipid metabolism Others feel that it is a disturbance of one of the enzyme systems. Rheumatoid arthritis (psoriatic arthropathy) may be associated with the eruption

Differential diagnosis Seborrheic dermatitis secondary syphilis lichen planus pityriasis rosea nail lesions simulate onychomycosis

Therapy There is no specific therapy for psoriasis Many patients will respond to systemic placebo therapy and others seem to improve with ultraviolet therapy or natural sunlight Vitamin B_{12} by injection has been reported as suc-

cessful Tranquilizers are of value in some cases. Ointments containing 1 to 5 per cent chrysarobin or 1/10 to 1/2 per cent anthralin (purified derivative of chrysarobin) have helped. Many proprietary preparations are available to relieve the scaling.

Roentgen rays should be avoided because of the chronic recurrent nature of the condition.

Rhinoscleroma

Synonym. None

Sites of predilection. Nose, lips and nasopharynx.

Objective symptoms. The condition begins as flat plaques, papules, or nodules which spread peripherally. The tissues become indurated to the point where the nostrils cannot be compressed. The induration may extend to involve the lip, cheeks and the nasopharynx. Ulceration may follow trauma or infection.

Subjective symptoms. Pain and tenderness.

Etiology. *Klebsiella rhinoscleromatis.*

Histopathology. A granuloma which is diagnostic because of the presence of many plasma cells, Russell bodies (colloid cells) and Mikulicz cells (large histiocytes). Russell bodies are plasma cells which have undergone hyalin degeneration. The Mikulicz cells contain many Frisch bacilli.

Diagnostic aids. Biopsy.

Relation to systemic disease. None has been established.

Differential diagnosis. Rosacea, cellulitis.

Therapy. None effective. Streptomycin and the tetracyclines have reportedly been of benefit.

Sarcoidosis

Synonyms. Sarcoid, multiple benign sarcoid, benign miliary lupoid (Boeck), lupus pernio (Besnier).

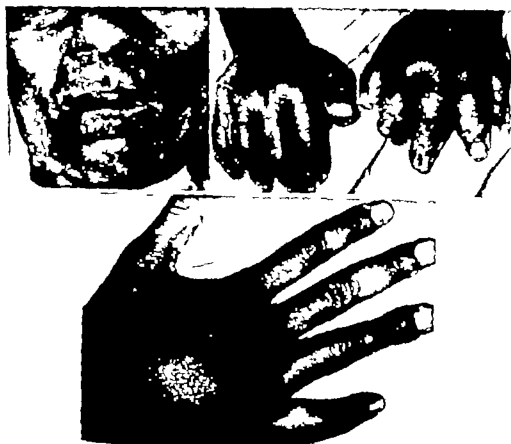


Fig. 71. Sarcoidosis.

benign lymphogranulomatosis (Schaumann) subcutaneous sarcoid (Darier Roussy)

Sites of predilection Any part of the body may be affected

Objective symptoms The cutaneous lesions of sarcoidosis are protean

Nodules papules, macules and infiltrating plaques may be present Atrophic or scarred lesions may occur The lesions may be white yellow dull red or dark Annular and circinate forms may be seen Small discrete and confluent translucent dull reddish or flesh-colored papules occurring on the alae of the nose and the back of the neck are characteristic There is frequently a generalized lymphadenopathy Fusiform swelling of the phalanges and destruction of the distal portions of the digits are not uncommon Swelling of the parotid glands and iridocyclitis (uveoparotid fever) are also symptoms of this disease The nodules may be small and superficial or large and subcutaneous

Subjective symptoms Malaise cough cachexia and general debility

Etiology Unknown

Histopathology Circumscribed nests of epithelioid cell surrounded by a fibrous network Foreign body giant cells are present

Diagnostic aids Biopsy The tuberculin test is usually negative X ray of the chest may reveal infiltrations in the hilar regions. Hypoproteinemia with reversal of the albumin-globulin ratio may be present and there may be a tendency toward lowered total white count

Relation to systemic disease Sarcoidosis is always a systemic disease

Differential diagnosis Lupus vulgaris lymphoblastoma lupus erythematosus discoid type

Therapy Sarcoidosis responds well to systemic corticosteroid therapy Good results have also been reported with antimalarial drugs such as Triquin Camoquin Aralen and Atabrine

Sarcoma of Kaposi Multiple Hemorrhagic

Synonym Idiopathic hemorrhagic sarcoma

Sites of predilection Lower extremities less commonly upper extremities

Objective symptoms This slowly progressive malignant disease begins as groups of small bluish red to reddish brown papules or nodules. The semisolid lesions may be discrete or confluent forming ill defined plaques Telangiectasia may be present The lesions may remain unchanged for several months or temporarily involute spontaneously New lesions invariably develop and ulceration may occur Occasionally the tumors assume massive proportions. The legs become greatly enlarged and the skin is covered with nodules and is bluish or purplish. The course of the disease is slowly progressive over a period of 1 to 25 years. Death may be caused by visceral involvement

Subjective symptoms Visceral involvement is productive of constitutional symptoms.

Etiology Unknown

Histopathology Early lesions are granulomatous There is dilatation and an increase in the number of blood vessels in the corium Later lesions are angiomatous or resemble fibrosarcoma.

Diagnostic aids Biopsy history and physical examination.

Relation to systemic disease Lesions may develop in any or all of the viscera

Differential diagnosis Late cutaneous syphilis erythema induratum erythema nodosum lymphoblastoma

Therapy Conventional roentgen rays in divided doses may be of value

Saurfasis

Synonym Severe ichthyosis alligator skin

Sites of predilection Trunk and extremities.

Objective symptoms This is a severe form of ichthyosis in which all symptoms are magnified so that the integument resembles an alligator's hide with wart-like or spiny projections, dark gray in color The condition is noninflammatory Extensive ichthyosis in a newborn infant may be fatal (Harlequin fetus)

Subjective symptoms. None

Etiology Congenital

Histopathology Hyperkeratosis with diminution or absence of the granular layer

Diagnostic aids Biopsy history and physical examination

Relation to systemic disease None

Differential diagnosis The condition is characteristic

Therapy None is effective Keratolytics may help

Sporotrichosis

Synonym. None

Sites of predilection Distal portions of the extremities.

Objective symptoms. The organism is inoculated through contact with infected animal excreta or vegetation in an area of trauma The first lesion which appears is an indurated nodule called the sporotrichal chancre A localized abscess or ulcer forms at this site and the infection ascends along lymphatic channels, leaving a succession of violaceous, painless nodules (1 to 2 cm) which may become fluctuant. Regional lymphadenopathy is uncommon. Visceral involvement especially pulmonary frequently occurs Osseous involvement and chronic draining sinuses may develop

Subjective symptoms. The cutaneous lesions cause few if any subjective symptoms

Etiology *Sporotrichum schenckii*

Histopathology Nonspecific granuloma containing plasma cells, epithelioid cells and Langhans giant cell

Diagnostic aids. Culture on Sabouraud's media biopsy roentgenogram of chest.

Relation to systemic disease The disease may become systemic

Differential diagnosis. Syphilis localized pyogenic abscesses other deep mycoses tularemia tuberculosis cutis

Therapy Potassium iodide 2 to 6 gm daily by mouth, or sodium iodide daily injections, 1 to 6 gm intravenously

Syphilis Late Cutaneous

Synonym Gumma

Sites of predilection Lower third of the legs thighs, trunk face and scalp. Any area may become involved

Objective symptoms The cutaneous lesions of late syphilis may appear as a solitary nodule or plaque-like lesion.

Solitary gumma These are usually solitary subcutaneous nodules which appear from 5 to 30 years after onset of infection. These lesions grow slowly the overlying skin gradually becoming hyperpigmented. When the lesions attain a size of 5 cm. or larger they become fluctuant and the overlying skin sloughs to form a crateriform or cup-shaped ulcer with precipitous sides

Nodular syphiloderm These plaque-like lesions are a form of late syphilis which appear from 2 to 5 years after onset of infection. They begin as a group of nodules which coalesce to form a serpiginous plaque in the border of which may be felt the subcutaneous nodules. The lesions may ulcerate forming a nodular *ulcerative syphiloderm* When the nodules ulcerate the characteristic gumma-like ulcers are formed.

Subjective symptoms None

Etiology See chapter on Venereal Diseases

Histopathology See chapter on Venereal Diseases

Diagnostic aids See chapter on Venereal Diseases.

Relation to systemic disease See chapter on Venereal Diseases.

Differential diagnosis See chapter on Venereal Diseases.

Therapy See chapter on Venereal Diseases

Syphilis, Papular

Synonym The pox secondary syphilis.

Sites of predilection Generalized

Objective symptoms. The lesions may be small conical papules 1 or 2 mm. in diameter which are reddish-brown (coppery or raw ham) in color discrete or forming small groups (*false corymbose grouping*)

The lesions may be large and flat (lenticular papules) varying in size from 2 mm to 1 cm in diameter These lesions also have the characteristic color They may form groups, with a central lesion surrounded by a ring of papules (*true corymbose grouping*)

Annular papules occur most commonly on the face When these occur at the corners of the mouth or in the nasolabial folds they form *split papules.* This type of lesion is most frequently seen in Negroes

In the genitocrural areas, under the breast between the toes, and in the perianal region,

papules become hypertrophic and eroded with a gray h moist surface These lesions are usually discrete but may become confluent and are known as *hypertrophic eroded papules* or *condylomata lata* These lesions are highly contagious usually teeming with spirochetes

Subjective symptoms Usually none although Negroes may complain of itching

Etiology *Treponema pallidum*

Histopathology The picture is suggestive but not pathognomonic There is some parakeratosis and the rete shows a varying degree of acanthosis without much edema The infiltrate which consists of mononuclear cells (small and large) and plasma cells tends to be dense toward the surface and decreases like an inverted cone There is endothelial swelling of the superficial and deep vessels which are surrounded by a coat-sleeve infiltrate

Diagnostic aids Dark field examination serologic tests for syphilis history and physical examination

Relation to systemic disease Syphilis is always a systemic disease See the chapter on Venereal Diseases

Differential diagnosis Psoriasis papular pityriasis rosea lichen planus verruca acuminata

Therapy See the chapter on Venereal Diseases.

Syringocystoma

Synonym Syringocystadenoma

Sites of predilection Trunk and extremities.

Objective symptoms This is a rare condition in which one sees numerous small (1 to 3 mm) shiny pinkish to brownish or yellow translucent papules

Subjective symptoms None

Etiology Congenital These lesions are small tumors derived from misplaced embryonic sweat ducts or sweat glands.

Histopathology Large number of round or oval masses of epithelium and epithelial lined tubules. Malformed sweat tubules in aimless coils are present in the dermis.

Diagnostic aids Biopsy

Relation to systemic disease None has been established

Differential diagnosis Benign cystic epithelioma papular syphiloderm the xanthomas.

Therapy None is effective The lesions may be destroyed locally if desired

TUBERCULOSIS CUTIS

Tuberculosis of the skin occurs with less frequency in the United States than in most countries of Europe and Asia The type of clinical manifestation depends on the site and mode of inoculation and the degree of immunity of the individual

Cutaneous tuberculosis may be caused by inoculation of the tubercle bacillus from an outside source or associated with hematogenous spread or sensitization reaction

I Cutaneous tuberculosis caused by inoculation into the skin.

A Primary tuberculous complex is known as a tuberculous chancre and results from local inoculation of the *Mycobacterium tuberculosis* into the skin in the absence of immunity

B Tuberculosis verrucosa cutis is a localized warty lesion which results from local inoculation of the *Mycobacterium tuberculosis* into the skin of individuals who have developed partial immunity

C Tuberculosis cutis orificialis lesions are ulcers which occur about the nose mouth and anus in persons who have extensive active visceral tuberculosis.

D Tuberculosis cutis colliquativa (scrofuloderma) These rare granulomatous lesions result from sinus tracts which originate in lymph nodes joints, or bones.

E Lupus vulgaris (tuberculosis cutis luposa) causes nodular lesions which usually occur on the face

II Cutaneous tuberculosis caused by hematogenous spread of the disease or sensitization reactions

A Acute miliary tuberculosis is a fulminating form of the disease in which the lesion are not limited to the skin There is little or no immunity present and the condition is fatal



FIG 72 Tuberculosis cutis A Indurativa B Papulonecrotic tuberculide C Verrucosa

B Tuberculosis papulonecrotica (folliclis or papulonecrotic tuberculid)
C Lichen scrofulosorum.
D Tuberculosis miliaris disseminata faciei
E. Tuberculosis cutis indurativa (erythema induratum)

Tuberculosis Cuti Colliquativa

Synonym. Scrofuloderma

Sites of predilection Area overlying lymph nodes, joints, or bones

Objective symptoms. Scrofuloderma is manifested by a deep-seated nodule which gradually increases in size becomes fluctuant and ulcerates, forming a granulomatous mass, which is the termination of sinus tract There may be numerous orifices which exude a thin, serous, sanguinous, or sanguino-purulent material. Dense linear band of scar tissue may form in the granulating area

Subjective symptoms. Some discomfort but surprisingly little when the extensive nature of the condition is considered

Etiology Mycobacterium tuberculosis.

Histopathology Tubercles within lymph nodes, undergo caseation necrosis with subsequent sinus tract formation. Tubercles may be found in the borders of the ulcers

Differential diagnosis. Lymphogranuloma venereum late cutaneous syphilis blastomycosis and other deep fungus diseases.

Relation to systemic disease The lesion is a manifestation of active tuberculosis.

Diagnostic aids. History and physical examination biopsy x-ray of chest studies for tuberculosis.

Therapy Streptomycin dihydrostreptomycin isoniazid and p-aminosalicylic acid. The underlying condition must be treated

Tuberculosis Cutis Indurati a

Synonym Erythema induratum Bazin s disease

Sites of predilection. Calves

Objective symptoms. One or more deep-seated nodules are located in the subcutaneous tissues. These lesions which vary from 1 to 4 cm gradually enlarge and undergo necrosis, forming ulcers, which heal with depressed scars. The skin over the lesions is usually dull reddish to bluish-red in color

The lesions tend to heal spontaneously but recur They most frequently occur in young women.

Subjective symptoms. The intact lesions are slightly tender When ulceration occurs they may be very painful

Etiology Mycobacterium tuberculosis

Histopathology Numerous discrete tubercles form around the blood vessels in the subcutis The vessel walls are thickened and the vessels are destroyed There is marked inflammatory reaction in the subcutaneous tissue

Diagnostic aids History and physical examination biopsy x ray of chest studies for tuberculosis

Relation to systemic disease Active pulmonary or visceral tuberculosis may be associated

Differential diagnosis Gumma erythema nodosum

Therapy Streptomycin or dihydrostreptomycin and/or isoniazid and *p*-aminosalicylic acid

Tuberculosis Cutis Luposa

Synonym Lupus vulgaris.

Sites of predilection Nose and contiguous portions of the face Any part of the body may be involved

Objective symptoms The condition begins as one or more small soft yellowish red or reddish brown nodules which gradually increase in number and coalesce forming plaques. If a heavy glass slide (diascope) is pressed onto the lesion the individual translucent nodules with their characteristic reddish brown color may be seen The lesions may become hypertrophic and local edema may be present There may be telangiectasia and regional lymphadenopathy As the central portion of the lesion heals a thin scar resembling crumpled tissue paper or cigarette paper forms Ulceration and scar tissue may cause severe cosmetic deformity

Subjective symptoms None except for the cosmetic defect

Differential diagnosis Sarcoid discoid lesions of lupus erythematosus epitheliomas

Etiology Mycobacterium tuberculosis

Histopathology Tubercle formation in the mid and upper cutis with little tendency to caseation necrosis. The early lesions have a heavy lymphocytic infiltrate which is replaced by epithelioid cells and giant cells Dermal appendages are atrophied

Relation to systemic disease Associated with visceral tuberculosis

Diagnostic aids History and physical examination biopsy x ray of chest studies for tuberculosis

Therapy Streptomycin dihydrostreptomycin, isoniazid and *p*-aminosalicylic acid.

Tuberculosis Cutis Orificialis

Synonym Tuberculous ulcers.

Sites of predilection About the nose mouth, and anus.

Objective symptoms This form of cutaneous tuberculosis is associated with the late stages of widespread tuberculosis of the lungs or other internal organs. It begins with the formation of small yellowish nodules, which break down to form shallow granulating ulcers These lesions spread peripherally and show no tendency to heal

Subjective symptoms Some discomfort especially when the tongue is involved

Etiology Mycobacterium tuberculosis

Histopathology Large numbers of circumscribed tubercles in the corium Tubercle bacilli are easily demonstrated in the tissue

Differential diagnosis Blastomycosis pyodermas

Relation to systemic disease Related to advanced visceral tuberculosis The tuberculin test may be negative

Diagnostic aids History and physical examination roentgenograms of chest sputum examination biopsy

Therapy Streptomycin dihydrostreptomycin, isoniazid and *p*-aminosalicylic acid

Tuberculosis Cutis Papulonecrotica

Synonym Folliclis papulonecrotic tuberculid acnitis.

Sites of predilection Trunk extremities and face

Objective symptoms There are few to numerous discrete deep-seated dull red to purplish rounded sessile papules. The center of each lesion undergoes necrosis The crusted lesions may persist for years

Subjective symptoms None except the mental distress caused by the unsightly lesions.

Histopathology Obliterative endovasculitis in the cutis and subcutis, with caseous tubercle formation and small necrotic crusted ulcers

Etiology Mycobacterium tuberculosis

Differential diagnosis. Folliculitis, papulopustular secondary syphilis.

Relation to systemic disease. Probably a sensitization reaction associated with visceral tuberculosis.

Diagnostic aids. History and physical examination, biopsy, studies for systemic tuberculosis.

Therapy. Treatment of the underlying condition.

Tuberculosis Cutis Verrucosa

Synonym. Anatomic tubercle, prosector's wart, verruca necrogenica.

Sites of predilection. Hands, knees, or other areas subject to trauma.

Objective symptoms. This condition begins at the site of an abrasion or wound with a deep-seated, circumscribed, bluish-red or dull red, subcutaneous nodule which usually has a verrucous surface. The lesion may become hypertrophic or may involute in the center with an atrophic scar. The lesions vary from 2 mm. to irregular plaques up to cm. in diameter. Pustules may develop within the lesion.

Subjective symptoms. Usually none.

Etiology. Mycobacterium tuberculosis.

Histopathology. Marked acanthosis and hyperkeratosis are present and there is a heavy plasma cell and round cell infiltrate in the upper cutis. Tubercle formation may be demonstrated.

Differential diagnosis. Blastomycosis, verrucae, chronic pyoderma, granuloma annulare, foreign body granuloma.

Relation to systemic disease. Tuberculosis is a systemic disease.

Diagnostic aids. Biopsy, history and physical examination, x-ray examination of the chest.

Therapy. Surgical excision or destruction by electrodesiccation.

Tuberculous Complex, Primary

Synonym. Tuberculous chancre.

Sites of predilection. Face, extremities, and genitalia.

Objective symptoms. This lesion may vary from an inconspicuous, spontaneously healing nodule to a large bluish-red nodule or plaque with a central crusted ulcer and rolled border. Regional lymph nodes may become enlarged from 1 to 5 cm. in diameter. These are frequently productive of draining sinuses.

Subjective symptoms. None to slight local pain.

Etiology. Mycobacterium tuberculosis.

Histopathology. Tubercle formation with caseation necrosis. Each tubercle consists of nests of epithelioid cells and giant cells surrounded by a zone of lymphocytes and plasma cells.

Diagnostic aids. History and physical examination, x-ray of chest, biopsy. Patients in whom these lesions occur should be followed with serial roentgenograms of the chest for a minimum of 18 months to rule out systemic dissemination of the disease from the primary cutaneous lesion.

Relation to systemic disease. Tuberculosis is a systemic disease.

Differential diagnosis. Initial lesion of sporotrichosis, syphilis, or tularemia.

Therapy. Excision or local destruction of the lesion. Specific chemotherapy should be given.

Tularemia

Synonym. Rabbit fever, Francis' disease, deer fly fever, Pahvant Valley plague.

Sites of predilection. Initial lesion may occur at any site.

Objective symptoms. Tularemia is an infectious disease of polymorphic symptomatology. The disease may be ulcero-glandular, oculo-glandular, pneumonic, typhoidal, meningeal, or glandular. Of these, cutaneous manifestations are important only in the ulcero-glandular type.

After an incubation period of 2 to 9 days, a papule or nodule appears at the site of inoculation. This rapidly ulcerates, leaving a tender, firm, and indolent ulcer with a necrotic base which separates, giving a punched-out appearance. This heals with scar formation in about 6 weeks. Lymphangitis spreads from the initial lesion, the regional lymph nodes becoming swollen and painful, gradually becoming fluctuant but rarely breaking down.

Other skin lesions which are probably of toxic origin, are herpetic and erythema multiforme-like eruptions and localized pustules.

Subjective symptoms. Headache, chills, generalized malaise, and hyperpyrexia. The local lesions are painful and tender.

Etiology *Mycobacterium tuberculosis*

Histopathology Numerous discrete tubercles form around the blood vessels in the subcutis. The vessel walls are thickened and the vessels are destroyed. There is marked inflammatory reaction in the subcutaneous tissue.

Diagnostic aids History and physical examination, biopsy, x-ray of chest, studies for tuberculosis.

Relation to systemic disease Active pulmonary or visceral tuberculosis may be associated.

Differential diagnosis Gumma, erythema nodosum.

Therapy Streptomycin or dihydrostreptomycin and/or isoniazid and *p*-aminosalicylic acid.

Tuberculosis Cutis Luposa

Synonym Lupus vulgaris.

Sites of predilection Nose and contiguous portions of the face. Any part of the body may be involved.

Objective symptoms This condition begins as one or more small, soft, yellowish red or reddish brown nodules which gradually increase in number and coalesce, forming plaques. If a heavy glass slide (diascope) is pressed onto the lesion, the individual translucent nodules with their characteristic reddish brown color may be seen. The lesions may become hypertrophic and local edema may be present. There may be telangiectasia and regional lymphadenopathy. As the central portion of the lesion heals, a thin scar resembling crumpled tissue paper or cigarette paper forms. Ulceration and scar tissue may cause severe cosmetic deformity.

Subjective symptoms None except for the cosmetic defect.

Differential diagnosis Sarcoid, discoid lesions of lupus erythematosus, epitheliomas.

Etiology *Mycobacterium tuberculosis*

Histopathology Tubercle formation in the mid and upper cutis, with little tendency to caseation necrosis. The early lesion have a heavy lymphocytic infiltrate which is replaced by epithelioid cells and giant cells. Dermal appendages are atrophied.

Relation to systemic disease Associated with visceral tuberculosis.

Diagnostic aids History and physical examination, biopsy, x-ray of chest, studies for tuberculosis.

Therapy Streptomycin, dihydrostreptomycin, isoniazid and *p*-aminosalicylic acid.

Tuberculosis Cutis Orificialis

Synonym Tuberculous ulcers.

Sites of predilection About the nose, mouth, and anus.

Objective symptoms This form of cutaneous tuberculosis is associated with the late stages of widespread tuberculosis of the lungs or other internal organs. It begins with the formation of small yellowish nodules which break down to form shallow, granulating ulcers. These lesions spread peripherally and show no tendency to heal.

Subjective symptoms Some discomfort, especially when the tongue is involved.

Etiology *Mycobacterium tuberculosis*

Histopathology Large numbers of circumscribed tubercles in the corium. Tubercle bacilli are easily demonstrated in the tissue.

Differential diagnosis Blastomycosis, pyoderma.

Relation to systemic disease Related to advanced visceral tuberculosis. The tuberculin test may be negative.

Diagnostic aids History and physical examination, roentgenograms of chest, sputum examination, biopsy.

Therapy Streptomycin, dihydrostreptomycin, isoniazid and *p*-aminosalicylic acid.

Tuberculosis Cutis Papulonecrotica

Synonym Folliclis, papulonecrotic tuberculid, acnitis.

Sites of predilection Trunk, extremities, and face.

Objective symptoms There are few to numerous, discrete, deep-seated, dull red to purplish, rounded sessile papules. The center of each lesion undergoes necrosis. The crusted lesions may persist for years.

Subjective symptoms None except the mental distress caused by the unsightly lesions.

Histopathology Obliterative endovasculitis in the cutis and subcutis, with caseous tubercle formation and small necrotic crusted ulcers.

Etiology *Mycobacterium tuberculosis*

Differential diagnosis. Folliculitis papulopustular secondary syphilis.
Relation to systemic disease. Probably a sensitization reaction, associated with visceral tuberculosis.
Diagnostic aids. History and physical examination biopsy studies for systemic tuberculosis.
Therapy. Treatment of the underlying condition.

Tuberculosis Cutis Verrucosa

Synonym. Anatomic tubercle prosector's wart verruca necrogenica.
Sites of predilection. Hands, knees, or other areas subject to trauma.
Objective symptoms. This condition begins at the site of an abrasion or wound, with a deep-seated circumscribed, bluish-red or dull red subcutaneous nodule which usually has a verrucous surface. The lesion may become hypertrophic or may involute in the center with an atrophic scar. The lesions vary from 2 mm. to irregular plaques up to 5 cm. in diameter. Pustules may develop within the lesion.
Subjective symptoms. Usually none.
Etiology. *Mycobacterium tuberculosis.*
Histopathology. Marked acanthosis and hyperkeratosis are present and there is a heavy plasma cell and round cell infiltrate in the upper cutis. Tubercle formation may be demonstrated.
Differential diagnosis. Blastomycosis verrucae bromoderma granuloma annulare foreign body granuloma.
Relation to systemic disease. Tuberculosis is a systemic disease.
Diagnostic aids. Biopsy history and physical examination x-ray examination of the chest.
Therapy. Surgical excision or destruction by electrodesiccation.

Tuberculous Complex, Primary

Synonym. Tuberculous chancre.
Sites of predilection. Face extremities, and genitalia.
Objective symptoms. This lesion may vary from an inconspicuous spontaneously healing nodule to a large bluish-red nodule or plaque with a central crusted ulcer and rolled border. Regional lymph nodes may become enlarged from 3 to 5 cm. in diameter. These are frequently productive of draining sinuses.
Subjective symptoms. None to slight local pain.
Etiology. *Mycobacterium tuberculosis.*
Histopathology. Tubercle formation with caseation necrosis. Each tubercle consists of nests of epithelioid cells and giant cells surrounded by a zone of lymphocytes and plasma cells.
Diagnostic aids. History and physical examination x-ray of chest biopsy. Patients in whom these lesions occur should be followed with serial roentgenograms of the chest for a minimum of 18 months to rule out systemic dissemination of the disease from the primary cutaneous lesion.
Relation to systemic disease. Tuberculosis is a systemic disease.
Differential diagnosis. Initial lesions of sporotrichosis syphilis, or tularemia.
Therapy. Excision or local destruction of the lesion. Specific chemotherapy should be given.

Tularemia

Synonym. Rabbit fever Francis disease deer-fly fever Pahvant Valley plague.
Sites of predilection. Initial lesion may occur at any site.
Objective symptoms. Tularemia is an infectious disease of polymorphic symptomatology. The disease may be ulcero-glandular oculo-glandular pneumonic typhoidal, meningeal or glandular. Of these cutaneous manifestations are important only in the ulcero-glandular type.

After an incubation period of 2 to 9 days, a papule or nodule appears at the site of inoculation. This rapidly ulcerates leaving a tender firm, and indolent ulcer with a necrotic base which separates, giving a punched-out appearance. This heals with scar formation in about 6 weeks. Lymphangitis spreads from the initial lesion, the regional lymph nodes becoming swollen and painful, gradually becoming fluctuant but rarely breaking down.

Other skin lesions, which are probably of toxic origin, are herpetic and erythema multiforme-like eruptions, and localized pustules.
Subjective symptoms. Headache chills, generalized malaise, and hyperpyrexia. The local lesions are painful and tender.

Etiology *Pasteurella tularensis* The disease occurs chiefly in Southwestern United States, although sporadic cases have been reported in almost all parts of the country Lesions develop in people who handle infected small animals such as wild rabbits squirrels and other game The disease is also transmitted by the deer fly and some ticks.

Histopathology The microscopic changes in the tularemic ulcer are not diagnostic

Diagnostic aids Culture history and physical examination

Relation to systemic disease Tularemia is always a systemic disease

Differential diagnosis Syphilis (primary lesion) sporotrichosis.

Therapy Chloramphenicol or one of the tetracyclines, 250 to 500 mg 4 times daily for 1 to 2 weeks Streptomycin 2 gm daily for 1 week

Turban Tumor

Synonym Cylindroma nevus epitheliomatocylindromatosus endothelioma capitis sarcoma capitis

Sites of predilection Scalp

Objective symptoms This condition is characterized by the development of slow growing flesh colored to red tumors which vary from 1 to 8 cm in diameter The lesions may cover the entire scalp and smaller lesions may appear on the face chest and back

Subjective symptoms None

Etiology Unknown Probably congenital

Histopathology The microscopic picture is characterized by masses of basal cell surrounded by connective tissue membranes The peripheral cells are palisaded whereas the central portion shows hyaline degeneration and cyst formation

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis The disease is characteristic in appearance

Therapy Excision

Urticaria

Synonym Hives nettle rash

Sites of predilection Any area may be affected

Objective symptoms The primary lesion or wheal is



Fig 73 Urticaria Dermographism

a whitish pinkish or reddish, well defined area of localized edema The lesion assume many shapes and sizes, varying from a few millimeter in diameter to lesions which involve an entire eyelid lip or finger (*angioneurotic edema Quincke s edema*) They may be nummular annular or gyrate and may be topped by a vesicle Pseudopod. may develop There i no scale present The lesions are usually transitory but recurrent Slight trauma may result in wheal formation (dermographia)

Subjective symptoms Moderate to intense itching.

Etiology Urticaria is an allergic phenomenon in which the shock organ is the small capillary in the cutis. Ingestants such as drugs, shellfish, chocolate nuts, or spoiled foods may be precipitating factors. Injected substances such as penicillin and tetanus antitoxin are frequent offenders. Focal infections may precipitate urticaria Psychic stimuli play a definite role. Isolated wheals may result from the bites of insects such as mosquitos, *Cimex lectularius* (bed bug) sea nettles, fleas and grain-itch mites.

Histopathology Edema of connective tissue and fixed tissue cells with cellular infiltration swelling of the sweat gland cells and deposit of fibrin

Diagnostic aids History and physical examination

Relation to systemic disease Gastrointestinal disturbances and other allergic disturbances frequently accompany urticaria

Differential diagnosis The disease is characteristic.
Therapy Detect and eliminate the offending substance or focal infection Antihistaminic drugs may be of value In severe or chronic conditions, or where there is danger of edema of the glottis, corticosteroid therapy may be indicated.

Urticaria Papul

Synonym. Papular urticaria urticaria papulosa lichen urticatus prurigo simplex.
Sites of predilection Generalized.
Objective symptoms This condition usually occurs in childhood as a chronic, recurrent eruption in the spring and summer The primary lesion is a small urticarial papule or papulovesicle which subsides, leaving a small, firm persistent papule Numerous excoriations and blood crusts are noted. Secondary pyogenic infection is frequently present
Subjective symptoms. Moderate to severe itching.
Etiology Unknown. The condition may be caused by insect bites or food or drug sensitivity
Histopathology The microscopic picture is not diagnostic
Diagnostic aid Examination of house for insect vectors history and physical examination
Relation to systemic disease None
Differential diagnosis. Scabies varicella.
Therapy The living quarters and bed should be thoroughly fumigated with DDT or other insecticide Dietary allergens such chocolate citrus fruits, and tomatoes should be restricted



Fig 74 Papular urticaria

Local therapy consists of antipruritics and emollient such as calamine lotion or calamine liniment

Urticaria Pigmentosa

Synonym. Xanthelasmoidea mastocytosis.
Sites of predilection. Trunk upper extremities any area of the body may be involved.



Fig 75 Urticaria pigmentosa

Objective symptoms. The condition usually develops in early infancy as wheals, papules, and infiltrated macules. Bullous lesions may develop When the lesions involute, they leave a reddish-brown or yellowish-brown color in the involved area. When irritated, these pigmented lesions urticate The condition is chronic. The condition may subside at puberty
Subjective symptoms. Itching
Etiology Unknown
Histopathology The microscopic picture is characteristic Large numbers of mast cells in the cutis distend the papillary bodies. A narrow band of normal connective tissue frequently separates the corium and the epidermis. The collagen bundles are separated.
Diagnostic aids. Biopsy history and physical examination hemograms x-ray of the long bones.
Relation to systemic disease The disease is occasionally associated with osteoporosis
Differential diagnosis. The lesions are characteristic in appearance
Therapy There is no effective therapy

Etiology Pasteurella tularensis The disease occurs chiefly in Southwestern United States although sporadic cases have been reported in almost all parts of the country *Lesions develop in people* who handle infected small animal such as wild rabbits squirrels and other game The disease is also transmitted by the deer fly and some ticks.

Histopathology The microscopic changes in the tularemic ulcer are not diagnostic

Diagnostic aids Culture history and physical examination

Relation to systemic disease Tularemia is always a systemic disease

Differential diagnosis Syphilis (primary lesion) sporotrichosis.

Therapy Chloramphenicol or one of the tetracyclines 250 to 500 mg 4 times daily for 1 to 2 weeks Streptomycin 2 gm daily for 1 week

Turban Tumor

Synonym Cylindroma nevus epitheliomatocylindromatosus endothelioma capitis sarcoma capitis.

Sites of predilection Scalp

Objective symptoms This condition is characterized by the development of slow growing flesh colored to red tumors which vary from 1 to 8 cm in diameter The lesions may cover the entire scalp and smaller lesions may appear on the face chest and back

Subjective symptoms None

Etiology Unknown *Probably congenital*

Histopathology The microscopic picture is characterized by masses of basal cells, surrounded by connective tissue membranes. The peripheral cells are palisaded whereas the central portion shows hyaline degeneration and cyst formation

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis The disease is characteristic in appearance

Therapy Excision

Urticaria

Synonym Hives nettle rash

Sites of predilection. Any area may be affected

Objective symptoms The primary lesion or wheal is a whitish pinkish or reddish well defined area of localized edema The lesions assume many shapes and sizes, varying from a few millimeters in diameter to lesions which involve an entire eyelid lip or finger (*angioneurotic edema Quincke s edema*) They may be nummular annular or gyrate and may be topped by a vesicle Pseudopods may develop There is no scale present The lesions are usually transitory but recurrent Slight trauma may result in wheal formation (dermographia)



Fig 73 Urticaria Dermographism

Subjective symptoms Moderate to intense itching

Etiology Urticaria is an allergic phenomenon in which the shock organ is the small capillary in the cutis. Ingestants such as drugs, shellfish, chocolate nuts, or spoiled foods may be precipitating factors. Injected substances such as penicillin and tetanus antitoxin are frequent offenders Focal infections may precipitate urticaria Psychic stimuli play a definite role Isolated wheals may result from the bites of insects such as mosquitos *Cimex lectularius* (bed-bug) sea nettles, fleas and grain itch mites.

Histopathology Edema of connective tissue and fixed tissue cells with cellular infiltration swelling of the sweat gland cells and deposit of fibrin

Diagnostic aids History and physical examination

Relation to systemic disease Gastrointestinal disturbances and other allergic disturbances frequently accompany urticaria

Differential diagnosis. The disease is characteristic.
Therapy. Detect and eliminate the offending substance or focal infection. Antihistaminic drugs may be of value. In severe or chronic conditions, or where there is danger of edema of the glottis, cortico-steroid therapy may be indicated.

Urticaria Papular

Synonym. Papular urticaria, urticaria papulosa, lichen urticatus, prurigo simplex.
Sites of predilection. Generalized.
Objective symptoms. This condition usually occurs in childhood as a chronic recurrent eruption in the spring and summer. The primary lesion is a small urticarial papule or papulovesicle which subsides leaving a small, firm, persistent papule. Numerous excoriations and blood crusts are noted. Secondary pyogenic infection is frequently present.
Subjective symptoms. Moderate to severe itching.
Etiology. Unknown. The condition may be caused by insect bites or food or drug sensitivity.
Histopathology. The microscopic picture is not diagnostic.
Diagnostic aid. Examination of house for insect vectors, history and physical examination.
Relation to systemic disease. None.
Differential diagnosis. Scabies, varicella.
Therapy. The living quarters and bed should be thoroughly fumigated with DDT or other insecticide. Diet try allergens such as chocolate, citrus fruit, and tomatoes should be restricted.



FIG. 71. Papular urticaria.

Local therapy consists of antipruritics and emollients such as calamine lotion or calamine liniment.

Urticaria Pigmentosa

Synonym. Xanthelasmoidea, mastocytosis.
Sites of predilection. Trunk, upper extremities; any area of the body may be involved.



FIG. 72. Urticaria pigmentosa.

Objective symptoms. The condition usually develops in early infancy as wheals, papules, and infiltrated macules. Bullous lesions may develop. When the lesions involute, they leave a reddish-brown or yellowish-brown color in the involved area. When irritated, these pigmented lesions urticate. The condition is chronic. The condition may subside at puberty.
Subjective symptoms. Itching.
Etiology. Unknown.
Histopathology. The microscopic picture is characteristic. Large numbers of mast cells in the cutis distend the papillary bodies. A narrow band of normal connective tissue frequently separates the corium and the epidermis. The collagen bundles are separated.
Diagnostic aids. Biopsy, history and physical examination, hemograms, x-ray of the long bones.
Relation to systemic disease. The disease is occasionally associated with osteoporoma.
Differential diagnosis. The lesions are characteristic in appearance.
Therapy. There is no effective therapy.

VERRUCAE (WARTS)

Warts have a common virus etiology The appearance of the lesion varies according to its location

Verruca Acuminata

Synonym Venereal wart condyloma acuminatum

Sites of predilection Genital and perianal region

Objective symptoms Verruca acuminatum is a pedunculated or sessile round or leaf-shaped lesion which may be discrete or form confluent cauliflower-like masses They remain intact or become eroded flat and moist and vary from flesh color to grayish brown They may be slowly growing persisting for months or grow to enormous sizes (5 cm or larger) within a few weeks.

Subjective symptoms None to slight itching

Etiology Virus.

Histopathology Proliferation of the prickle cell layer with intracellular edema Numerous mitotic figures are present and there is a multicellular infiltrate Papillary bodies are elongated

Diagnostic aids Biopsy dark field to rule out secondary syphilis.

Relation to systemic disease None has been established

Differential diagnosis Condyloma latum (secondary syphilis) ecthyma

Therapy Surgical excision or electrodesiccation is usually not successful. The lesions may be successfully treated with weekly applications of a 25 per cent solution of podophyllin in compound tincture of benzoin This usually effective treatment must be carefully performed by the physician himself



Fig 76 Verruca acuminata of vulva and penis

Verruca Plana Juvenilis

Synonym Flat warts of childhood

Sites of predilection Face neck, hands, wrist and knees.

Objective symptoms This condition usually occurs in children as numerous slightly raised, flat topped circinate flesh-colored lesion which may be discrete or form irregular groups, with a tendency towards linear arrangement (Köbner phenomenon)



Fig 77 Verruca plana juvenilis

Subjective symptoms None

Etiology Virus.

Histopathology The histopathologic picture is similar to that seen in verruca vulgaris, but the changes are not as marked The stratum corneum r thickened, but in a basket weave pattern.

Diagnostic aids Biopsy

Relation to systemic disease May be associated with tension states

Differential diagnosis Lichen planus lichen nitidus molluscum contagiosum

Therapy Light desiccation Vleminckx s solution locally applied bistrimate tablets orally or weekly injections of bismuth subsalicylate

Verruca Plantaris

Synonym Plantar wart

Sites of predilection Pressure point on the plantar surfaces

Objective symptoms. The lesion may appear as a callus removal of which reveal a solid central translucent body In this central area there are usually black dot or points, which are actually hypertrophied papillae filled with small masses of coagulated blood. This portion of the lesion is surrounded by zone of hyperkeratosis Plantar wart may be single or appear in groups. A large central wart and closely aggregated smaller satellite lesions form an area known as mosaic wart.

Subjective symptoms None to severe pain.

Etiology Virus

Histopathology The microscopic picture is similar to that of verruca vulgaris (q v)

Diagnostic aids. Biopsy

Relation to systemic disease None

Differential diagnosis Callus or corn.

Therapy There is no specific form of therapy Surgical removal of lesions is usually ineffective Psychotherapy may be effective particularly in small children. Bismuth subsalicylate by intramuscular injection or bistrimate by mouth may be of value Conventional x ray therapy is effective in some cases. Keratolytic plasters may be of value

Verruca Vulgaris

Synonym Common wart

Sites of predilection Hand less frequently the face, lips, eyelids, and other area

Objective symptoms. One or more discrete or confluent lesions may occur The lesions are grayish, dark brown or grayish-brown round or oval, well defined papules varying from 2 mm. to 1 or more cm. in diameter The early lesion is usually smooth and shiny but gradually becomes rough and gray Occasionally on the face or eyelids, they are seen a thread-like projections called *filiform warts* Pedunculated lesions may develop

Subjective symptoms. None

Etiology Virus. These lesions occur frequently in emotionally tense patients.

Histopathology Marked acanthosis and hyperkeratosis, with graduating proliferation of the



Fig. 78. Verruca vulgaris

rete ridges, deepest at the center Parakeratosis in the stratum corneum is evidenced by swollen vacuolated cells which *retain their nuclei* Numerous mitotic figures are present

Diagnostic aids Biopsy

Relation to systemic disease These lesions frequently occur in emotionally tense patients

Differential diagnosis Molluscum contagiosum

Therapy One of the more effective forms of therapy is the careful application of liquid nitrogen to each lesion Electrodesiccation may be effective Psychotherapy may be effective

XANTHOMATOSIS

Hypercholesterolemia without significant elevation of neutral fat in the blood serum is a condition in which nodular xanthomas develop about the joints and along tendon sheaths. Flat tumors occur on the eyelid. These people are subject to atherosclerosis and early coronary occlusion These cutaneous lesions may also be present in obstruction of the common bile duct myxedema hemochromatosis biliary cirrhosis and diabetes.

Hyperlipemia without significant elevation of cholesterol (idiopathic hyperlipemia) is associated with eruptive xanthomas of the small papular type generally without xanthelasma or xanthoma tuberosum Chronic pancreatitis, nephrosis, and von Gierke's disease are associated with this phenomenon

Xanthelasma

Synonym Xanthoma palpebrarum

Sites of predilection Eyelids.

Objective symptoms The primary lesion is a slowly growing yellow flat tumor covered by normal epidermis The lesions may be small and discrete or form *large confluent areas* *The condition occurs chiefly in persons past middle age* Other types of eruptive xanthomas may be present

Subjective symptoms None to slight itching

Etiology The reason for the development of these tumors on the eyelids is unknown

Histopathology The microscopic changes are similar to those seen in xanthoma tuberosum (*q v*) although there are *fewer Touton giant cells.*

Diagnostic aids. Biopsy blood studies history and physical examination

Relation to systemic disease Hypercholesterolemia occurs frequently in patients with xanthelasma. The condition may be associated with diabetes

Differential diagnosis Milia

Therapy Surgical excision or electrodesiccation are accepted methods of local treatment The lesions frequently respond to applications of phenol or dichloracetic acid. Intramuscular vitamin B_{12} may be of value in reducing the elevation of the lesions. Treatment of the systemic disease is necessary

Xanthoma Tuberosum Multiplex

Synonym None

Sites of predilection Over joints such as the elbows or knees, or over tendon sheaths. Any part of *the body may be involved*



Fig. 79 Xanthoma tuberosum multiplex

Objective symptoms. Usually numerous, flat or rounded, yellowish nodules are seen. These are firm in consistency, with telangiectatic vessels noted on the surface. Large lesions may be lobulated, and plaques may form. On the palms the larger creases and lines may be streaked with yellowish deposit.

Subjective symptoms. None.

Etiology. Hypercholesterolemia.

Histopathology. Nests of foam cells and Touton giant cells. Involution is accompanied by fibrosis and formation of cholesterol clefts.

Diagnostic aids. Biopsy, blood studies, electrocardiogram, history and physical examination.

Relation to systemic disease. Xanthoma tuberosum multiplex may be associated with diabetes (*xanthoma diabeticorum*). Other xanthoma may be associated.

Differential diagnosis. The clinical appearance of the cutaneous lesions is characteristic.

Therapy. Surgical excision. Low fat diet.

Xeroderma Pigmentosum

Synonym. Atrophoderma pigmentosum, melanosis lenticularis progressiva, lentigo maligna, angioma pigmentosum et atrophicum.

Sites of predilection. Exposed surfaces.

Objective symptoms. This rare, progressive disease usually begins early in life and is characterized first by a mottling of the skin in the areas exposed to sunlight, with hyperemia and some roughening of the surface. Within the next two or three years pigmentation appears in the form of small, freckle-like spots, which scale and appear like flat warts. These lesions become less pronounced in the winter, but in warm weather or when exposed to sunlight they become slightly raised. Telangiectasia develops and whitish atrophic spots appear. Angiomas and warty growths occur. The lesions frequently undergo malignant degeneration and become squamous cell carcinomas. Unexposed areas may become involved. The skin becomes thin and parchment-like. Corneal opacities may occur.

Subjective symptoms. Photophobia, lacrimation, general debility.

Etiology. Congenital. The condition may be familial in occurrence.

Histopathology. The changes vary with the stage of the disease and are not diagnostic. They simulate the changes seen in senescent skin and actinic dermatitis, with atrophy of the epidermis and senile elastosis.

Diagnostic aids. Biopsy, history and physical characteristics.

Relation to systemic disease. These children usually die at an early age, frequently before the second or third year.

Differential diagnosis. Chloasma, freckles (early), roentgen dermatitis.

Therapy. Treatment is of no benefit. Protection from sunlight is essential.

Yaws

Synonym. Frambesia.

For a description of this disease see the description of yaws in the chapter on Tropical Diseases.

Chapter 17

VESICULAR ERUPTIONS

Dermatitis Herpetiformis

Synonym Duhring's disease

Sites of predilection Sacral and scapular areas buttocks extensor surfaces of extremities scalp

Objective symptoms This condition may attack any age group The vesicular type is the most common variety seen There are usually few to numerous groups of vesicles on an erythematous base The vesicles are tense and have little tendency to rupture The groups of lesions may form complete rings or segments of rings. Older lesions which have healed leave residual pigmentation There are periods of remissions and relapses The disease usually runs a chronic benign course

Subjective symptoms Constitutional symptoms such as elevation of temperature and generalized malaise may occur Itching is intense The patient may also complain of a burning sensation of the skin

Etiology Unknown

Histopathology The vesicles and bullae are subepidermal Large numbers of eosinophiles are present in the vesicle cavity The cellular infiltrate in the cutis consists of eosinophiles with intermingling of mononuclear or polymorphonuclear cell

Diagnostic aids. Biopsy eosinophiles may range from 10 to 30 per cent of the total white cells

Relation to systemic disease None

Differential diagnosis Pemphigus vulgaris erythema multiforme bullosum scabies pediculosis corporis.

Therapy Sulfapyridine 2 to 3 gm daily in divided doses with reduction to a maintenance dose of 0.5 gm Blood counts and urinalyses must be done at frequent intervals while on this therapy Promacetin 3 to 4 gm. in divided daily doses with gradual reduction to 1 to 2 gm. daily Xylosulfon 100 to 150 mg daily is of value Locally use colloidal baths and antipruritic lotions or liniments.



Fig 80. Dermatitis herpetiformis

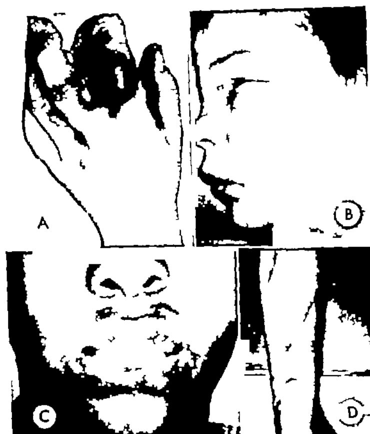
Dermatitis Venenata

Synonym Contact dermatitis

Sites of predilection Any exposed part of the body may be involved

Objective symptoms Erythema edema vesiculation serous exudation and secondary pyogenic infection may be present The vesicles are characteristically arranged in linear groups in cases caused by plant sensitivity or when a sensitizing liquid is applied to the skin and drips or runs on to an adjacent area When the face is involved moderate to intense edema of the periorbital area usually occurs. After the acute stage subsides one may note scaling in the involved areas.

Subjective symptoms Mild to severe pruritus burning or even pain may be experienced



F 61 Dermatitis venenata *A* Caused by poison ivy *B* Edema of face caused by poison ivy *C* Caused by bubble gum *D* Characteristic linear groups of vesicles

Etiology Acquired contact sensitivity See Chart 3 for some of the offending agents Plants local medicament creams lotions antifungal preparations and eye drops are also causative agent Substances or agent handled in industry are other etiologic factors

Histopathology In the epidermis there are varying degrees of intraepidermal vesiculation There is also intercellular edema with spongiosis Lymphocytes and polymorphonuclear leukocytes are scattered throughout the involved epidermis with evidence of parakeratosis of the horny layer In the cutis there is vascular dilatation and mild perivascular infiltrate consisting of leukocytes

Diagnostic aid Careful history of contact agents and patch testing with the suspected responsible agent biopsy

Relation to systemic disease None

Differential diagnosis Primary irritation neurodermatitis atopic eczema epidermophytosis dermatitis factitia (especially if a compensable occupational factor is involved)

Therapy Removal of the offending agent Locally apply compresses of cold Burow's solution diluted 1 32 cool normal saline or cool boric acid compresses. If large areas of the body are involved, use lukewarm colloidal oatmeal baths or Linit starch baths. Soothing bland lotions calamine liniment or steroid (hydrocortisone) lotions applied locally to the affected parts give relief If the involvement is extensive and there is no physical contraindication, systemic steroid therapy for 5 to 7 days in adequate dosage should be administered

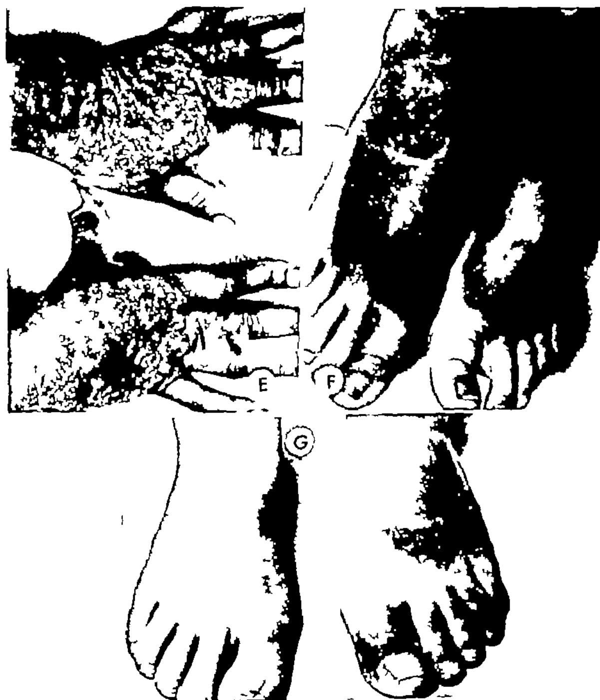


Fig 81 (cont) Dermatitis venenata E Caused by detergents F Caused by shoe dye G Caused by sandal strap

Chart 3

Some Offending Agents in Contact Dermatitis

Involved areas	Responsible agents	Involved areas	Responsible agents
Scalp	Hair lotions hair tonics shampoos pomades hair dyes, cold-wave chemicals spray nets, hair lacquers	Neck	Scarf cosmetics fur collar jewelry plastic bib dye from dress religious medallion, identification tags
Forehead	Hat band rubber bathing cap nylon or rubber elastic hair nets scalp and hair preparations	Axillae	Deodorants depilatories perfume and cologne dress shields dye from dress or shirt
		Trunk	Elastic in brassiere rubber girdle underwear cosmetics
Eyes	Nail polish, nail polish remover eye drops eye washes, mascara rubber eyelash curler plants (poison ivy sumac etc.)	Genitalia buttock	Contraceptive creams and jellies douching agent condoms men's shorts bathing trunks panties girdles
Ears	Earrings perfume cosmetics used in the hair eyeglass frames telephone receiver ear drops ear phones hearing aids	Arms and hand	Soaps detergents plastic wrist watch band, jewelry photographic materials, occupational agent and chemicals
Face	Cosmetics such as cleansing creams hormone wrinkle removers foundation lotions etc. Shaving cream, after-shave lotion soap rubber powder puff rubber masks pillow plant pollen insecticide sprays sun protective creams and lotions photographic materials	Legs and feet	Shoes (thermoplastic substance rubber cement leather shoe polish etc.) dye in sock and stockings depilatory agent fur-lined galoshes, external medicaments applied locally to the feet for epidermophytosis
Perioral, lip and nose	Bubble gum tooth paste and powder mouth wash lipstick, nose drops pipe stem cigarette holder mouth piece of musical instrument bristles foods		

Epidermolysis Bullosa

Synonym None

Site of predilection Feet legs, and hands and other areas which are frequently traumatized

Objective symptoms Usually divided into 2 types, *epidermolysis bullosa simplex* and *epidermolysis bullosa dystrophica*. Epidermolysis bullosa simplex appears shortly after birth with variously sized bullae 1 to 4 cm in diameter following trauma Lesions occur over the heel toes, feet ankles knees, elbows, and hands and are not preceded by erythema Less frequently one sees bullae on the back, chest abdomen, head, and face The bullae become turbid then rupture with resulting denuded areas. Epidermal cysts, resembling colloid milia, develop on the extremities Extensive scarring does not result in this form as compared to the dystrophic type The lesions heal and the condition improves at puberty Epidermolysis bullosa dystrophica also appears at or shortly after birth but results in marked atrophy and scarring. The toenails and fingernails may become atrophic and dystrophic changes occur resulting in destruction of the bones of the fingers and toes In this form the disease lasts throughout life. Patients usually die in childhood.

Subjective symptoms In the dystrophic type walking may be painful because of marked bony changes in the toes, etc.

Etiology Unknown The condition is congenital and may be familial At times it occurs in several generations of one family

Histopathology Vesicles and bullae are usually subepidermal

A mild to moderate chronic inflammatory infiltrate is seen in the upper cutis In the dystrophic form one may note epidermal cysts (milia) in the upper cutis.

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Pemphigus neonatorum pemphigus vulgaris dermatitis herpetiformis bullous syphilis in infants factitious dermatitis erythema multiforme bullosum

Therapy Protect patient from trauma In the advanced dystrophic type systemic steroid therapy may be life saving

Epidermophytosis

Synonyms Athlete's foot tinea pedis dermatophytosis.

Sites of predilection Feet and hands.

Objective symptoms The eruption begins with the development of variously sized (1 to 5 mm) thick walled discrete and confluent deep-seated vesicles on the feet The first lesions appear in the interdigital spaces, plantar surfaces of the toes, or the medial aspects of the feet



Fig 82 Epidermophytosis

Later because of the wearing of shoes, trauma, or overzealous therapy the areas become macerated The tissues in the interdigital spaces appear whitish and soggy Fissures develop with exfoliating margins and secondary pyogenic infection may occur Eroded areas appear on the medial and lateral surfaces of the feet and the lesions assume an eczematous appearance Chronic lesions develop in the interdigital spaces as the vesicle fluid is absorbed resulting in the appearance of hyperkeratotic lesion or soft corns Vesicles appear on and between the fingers and on the palms (epidermophytid) This manifestation is an allergic response to the fungus infection on the feet It may develop as a response to onychomycosis Secondary pyogenic infection may complicate the infection on the hands and feet Cellulitis lymphangitis and inguinal adenopathy may occur

Subjective symptoms Itching Pain predominates if secondary infection develops

Etiology The initial eruption is caused by one of the superficial dermatophytes The secondary pyogenic infection is caused by staphylococci or streptococci. Superimposed allergic contact dermatitis may develop because of overzealous therapy Latent fungus infections may be precipitated into activity by systemic antibiotic therapy

Histopathology Intracellular edema spongiosis and intraepidermal vesicle formation Infiltration of leukocytes in the upper cutis. The Hotchkiss-McManus stain reveals hyphae in the stratum corneum.

Diagnostic aids Direct examination of vesicle top or scales with 20 per cent potassium hydroxide or the ink-potassium hydroxide stain to demonstrate fungi in tissue Culture on Sabouraud's medium to determine the offending organism.

Relation to systemic disease None

Differential diagnosis Contact dermatitis dyshidrosis pustular psoriasis pustular bacterid pyodermas.

Therapy In the absence of secondary infection establish good hygiene Following the bath rinse the feet in alcohol and thoroughly dry Apply 5 per cent salicylic acid ointment 3 per cent salicylic acid in 0 per cent alcohol or half

strength Whitfield's ointment. Use a dusting powder between the toes and in the shoes. Change the socks twice daily and do not wear the same pair of shoes two days in succession. Do not attempt to sterilize the shoes. In warm weather wear perforated leather shoes or sandals. If possible avoid rubber shoes or synthetic soles. If secondary infection develops, the patient should be put at rest and should use hot soaks of boric acid solution for half-hour periods several times daily followed by the local application of an antibiotic ointment. If cellulitis or lymphangitis is present, systemic antibiotic therapy will be necessary. Conventional x-ray or Grenz-ray therapy is of no value in superficial fungus infections.

Griseofulvin, administered systemically, is effective.

Erythema Multiforme Bullosum

Synonym. Stevens-Johnson disease, ectodermosis erosiva pluriorificialis.

Sites of predilection. Lips, tongue, mouth, genitalia, dorsal surfaces of the hands and feet, forearms, and legs.

Objective symptoms. Variously sized tense vesicles measuring mm. to 3 cm. arising on an erythematous base. Rings within rings or circles within circles (iris or target lesions) may develop. These iris lesions are commonly seen on the palms and soles. Erosions with shreds of epithelium occur in the mouth and, when the lips are involved, crust formation may be marked. Bullous lesions measuring 1 cm. or more in diameter may develop and leave residual pigmentation after involution. This invariably occurs in fixed drug eruptions. The condition is characterized by frequent relapses.

Subjective symptoms. Slight to moderate itching and burning may be present. When the oral cavity is involved there is usually marked discomfort in chewing and swallowing.

Etiology. May be caused by a focus of infection, rheumatic fever, or drug sensitivity. The Hebra type is seasonal in occurrence.

Histopathology. Subepidermal vesicle formation with a perivascular inflammatory infiltrate in the cutis.

Diagnostic aids. Biopsy, history and physical examination.

Relation to systemic disease. May be evidence of an allergic reaction to penicillin, vaccines, or other drugs. The condition occurs in association with rheumatic fever and other infectious diseases. Without adequate treatment this condition may be fatal.

Differential diagnosis. Pemphigus vulgaris, dermatitis herpetiformis.

Therapy. Search for and eliminate the cause. Systemic steroid therapy is necessary when extensive involvement occurs. These drugs must be administered in adequate dosage in this potentially serious disease.

Grain Itch

Synonym. Straw itch.

Sites of predilection. Trunk and neck. Rarely occurs on face, hands, or feet.

Objective symptoms. The primary lesion is an erythematous wheal which has a small central vesicle (1 to 3 mm.). This central vesicle may become a pustule. Secondary pyogenic infection may develop.

Subjective symptoms. Moderate to severe itching, which is worse at night. Malaise and slight temperature elevation may be present.

Etiology. *Pediculoides ventricosus* (grain itch mite). Condition develops in persons who handle straw.

Histopathology. Intraepidermal vesicle. Edema of the cutis with an infiltrate of leukocytes and eosinophiles. Vascular dilatation is also present. Parasites are not found.

Diagnostic aids. History and physical examination, biopsy.

Relation to systemic disease. None.

Therapy. Antipruritic lotions, liniments, or creams. Removal of contaminated material from contact.

Herpes Gestationis

Synonym. Dermatitis herpetiformis associated with pregnancy.

Sites of predilection. Trunk and extremities.

Objective symptoms. The symptoms are identical with those of dermatitis herpetiformis. The

condition usually begins in the first trimester of pregnancy and is persistent through the early postpartum period. This dermatosis tends to recur with succeeding pregnancies. The symptoms may be severe enough to justify therapeutic interruption of the pregnancy.

Subjective symptoms. Intractable itching.

Etiology. Unknown.

Histopathology. See dermatitis herpetiformis.

Diagnostic aids. See dermatitis herpetiformis.

Relation to systemic disease. Occurs in association with pregnancy.

Differential diagnosis. See dermatitis herpetiformis.

Therapy. This condition is benefitted by systemic steroid therapy. Therapeutic abortion may be indicated.

Herpes Simplex

Synonym. Herpes labialis, fever blister, cold sores, herpes febrilis. On the genitalia these lesions are called herpes progenitalis.

Sites of predilection. Lips, nose, chin, mucous membranes, and other areas. May occur on the glans penis, under surface of the prepuce, and the labia minora.

Objective symptoms. Grouped, small vesicles on an erythematous base. The individual vesicles range from 1 to 3 mm. in diameter. The vesicle fluid is at first serous, but after a day or two becomes purulent. The lesions form a serous crust after a few days and usually heal without formation of scars. Submental adenopathy may occur when the lesions occur on the lower lip or regional adenopathy may accompany the lesions at other sites.



Fig 83 Herpes simplex

Subjective symptoms. Tingling, burning, and itching may precede the eruption. Slight fever and headache may be present during the height of the process.

Etiology. Caused by a filtrable virus. Since the virus lives on the skin and in the mouth it may become activated or "triggered" by actinic rays, cold, febrile illnesses, gastrointestinal disturbances, sensitivity to certain foods (e.g. hot mustard) and menstruation. These lesions may accompany Hodgkin's disease and other lymphoblastomas.

Histopathology. Multilocular intra-epidermal vesicles with degeneration of epidermal cells, giving rise to reticular degeneration. In the cutis there is an infiltrate of leukocytes.

Diagnostic aids. Biopsy if necessary.

Relation to systemic disease. At times occurs in acute febrile illnesses or toxic states when the temperature remains elevated for several days or weeks.

Differential diagnosis. Impetigo contagiosa, chancre of lips or genitalia, chancroid, contact dermatitis, herpes zoster.

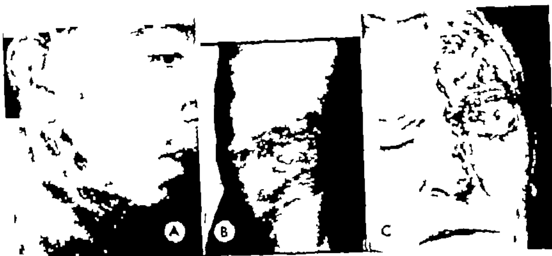
Therapy. During the acute vesicular stage local use of drying lotions or spirit of camphor locally may be of value. During the crusted stage apply an antibiotic ointment twice daily to the area. For the recurrent type, repeated smallpox vaccination every week for five successive times has been of value as a preventive measure in some cases. If the sun or cold are "trigger" factors the patient should be protected against exposure.

Herpes Zoster

Synonym. Shingles, zona, zoster.

Sites of predilection. The eruption follows a unilateral course along a nerve trunk such as an intercostal nerve, ophthalmic branch of the trigeminal nerve, sciatic nerve, etc.

Objective symptoms. Grouped vesicles on an ery-



F 84 A and B Herpes zoster C Herpes zoster ophthalmicus

thematous and edematous base follow the course of the in volved nerve The tense deep-seated vesicles measure 2 to 5 mm. in diameter The eruption is unilateral After 10 to 14 days from the onset the vesicles dry and become crusted. In some instances the lesions may become necrotic or gangrenous. Regional adenopathy may develop A generalized form of herpes zoster (varicelliform) may occur at times with certain systemic diseases such a the lymphoma

Subjectiv symptoms. Neuritis may be present over the area for several days before the vesicles appear The pain may be severe and if the area involved is over the abdomen an erroneous di gnosis of acute appendicitis, cholecystitis, or renal colic may be made Postherpetic pain over the i volved region may remain for many month after the eruption has completely cleared. This is especially true in elderly patients.

Etiology A virus identical with the virus causative of varicella. Some authorities believe that herpes oster is actually an atypical form of varicella in the adult

Histopathology Intra-epidermal unilocular vesicles which contain leukocytes and altered epithelial cell showing balloon cell degeneration. Within these balloon cells one sees eosinophilic inclusion bodies known Lipschutz bodies. Dilated blood vessels are present in the cutis with an inflammatory infiltrate consisting of lymphocytes and scattered polymorphonuclear leukocytes.

Diagnostic aids Biopsy

Relation t systemic disease The rare generalized form may occur in association with lymphoblastomas such as leukemia Hodgkin s disease etc. Herpes zoster may be associated with chronic infectious diseases such as malaria neurosyphilis, multiple sclerosis, leprosy or tuberculosis.

Differential diagnosis. Herpes simplex eczema dermatitis herpetiformis vaccinia

Therapy N specific therapy is available for this self-limited disease Aspirin and codeine may be given for pain. In the early course of the disease, daily injections of protamide may be of value in relieving ymptoms. Injections of vitamin B_1 intramuscularly in dosages of 1000 μg. 3 times a week, may be of some value Locally drying lotions and occlusive dressings to the affected part are helpful. If eye involvement occurs the patient should be under the care and supervision of an ophthalmologist

Hidrocystoma

Synonym. None

Sites f predilection. Face especially prominent on the forehead, infra-orbital and cheek areas.

Objective symptoms Single or multiple discrete non inflammatory whitish or bluish deep-seated vesicles. These tense vesicles do not readily rupture

Subjective symptoms None

Etiology Occurs in middle aged women who work in hot environments and perspire freely

Histopathology There are large dilated cystic cavities lined by two or more layers of epithelial cells in the cutis The cysts develop as a result of sweat retention in the ducts of the eccrine sweat glands

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Miliaria crystallina (sudamina) syringoma

Therapy Puncture each lesion with a sharp needle to release the fluid

Impetigo Contagiosa

Synonym Impetigo impetigo vulgaris

Sites of predilection Face especially about the mouth ears and nose

Objective symptoms Begins as a flaccid or tense well defined vesicle originating on normal skin or on an erythematous base The vesicle is filled with clear yellowish fluid which becomes pustular After a few days the lesion is covered with a thick yellow ("honey") crust The lesions may become confluent and spread with the development of more lesions because of the contagious nature and autoinoculability of the disease Annular lesions may occur

Other forms of impetigo

1 *Bockhart's impetigo* is follicular impetigo which is usually pustular from its onset The superficial small pustules occur at the orifices of the pilosebaceous apparatus. This variety is caused by a staphylococcus and is found as a complicating feature of some preexisting dermatoses. Sites of involvement are scalp thigh and forearms.

2 *Bullous impetigo* (pemphigus neonatorum) occurs in infants, with formation of bullae on the neck trunk and buttocks. Large areas of the body may be involved and systemic toxic complications such as septicemia may develop

Subjective symptoms. Itching and burning

Etiology *Staphylococcus aureus* and *albus*, and *Streptococcus pyogenes* Usually spread in schools and camps by direct contact with towels, etc May also occur secondary to some other underlying dermatoses such as pediculosis capitis, pediculosis pubis scabies and other pruritic conditions.

Histopathology A subcorneal vesicle containing polymorphonuclear leukocytes, lymphocytes, fibrin and bacteria The upper third of the cutis contains an inflammatory infiltrate consisting



Fig 85 Impetigo contagiosa

primarily of polymorphonuclear leukocytes and lymphocytes.

Diagnostic aids. Cultures, sensitivity tests.

Relation to systemic disease. Acute nephritis may be seen as a complication of impetigo contagiosa. Impetigo in the newborn may cause fatal bacteremia.

Differential diagnosis. Herpes simplex, contact dermatitis, pemphigus vulgaris, varicella, tinea, sycosis. The patient should be isolated until the lesions have completely healed.

Therapy. In the localized form, remove the crusts with warm boric acid or normal saline compresses and follow with applications of an antibiotic ointment. Avoid penicillin ointment because of its local and systemic sensitizing effect. If the eruption is extensive, systemic antibiotic therapy may be necessary. Cultures and sensitivity tests should be done if the eruption does not respond. Towels, clothing, pillow cases, etc., should be changed frequently because of the autoinoculability of the disease.

Isolation precautions should be observed.



F... 86. Infectious eczematoid dermatitis.

Infectious Eczematoid Dermatitis

Synonym. Engman disease.

Sites of predilection. May occur at any site.

Objective symptoms. Circumscribed confluent areas of erythema and edema with vesiculation, pustulation, scaling and crusting, surrounding a draining sinus, fistulous tract, or an infected ear canal. The plaques enlarge by peripheral extension. Satellit... lymphadenopathy may be present.

Subjective symptoms. Moderate to severe itching.

Etiology. A localized allergic phenomenon associated with a draining staphylococcic infection, such as otitis media, chronic ulcer, infected sinus, etc.

Histopathology. Vesicles, crust formation, intraepidermal vesicles and abscess formation, edema of the prickle cell layer, and presence of bacteria scattered throughout the epidermis.

Diagnostic aids. Culture of exudation from originating focus.

Relation to systemic disease. Otitis media, cervical cancer, postoperati... fistula, et...

Therapy. The localized areas may be treated with warm normal saline or boric acid compresses followed by steroid-antibiotic ointment or lotion. Treat the underlying infection with the appropriate antibiotic.

Lymphangioma Circumscriptum

Synonym. None.

Sites of predilection. May occur on any part of the body.

Objective symptoms. Groups of deep-seated thick-walled vesicles develop in infancy or early childhood. The tense vesicles are thick walled and contain a colorless or pinkish fluid (lymph). The lesions become crusted or hyperkeratotic, eventually resembling verrucae. Involvement of the tongue produces macroglossia.

Subjective symptoms. None.

Etiology. Congenital.

Histopathology. In the papillary and subpapillary layers of the cutis there are large numbers of

Objective symptoms Single or multiple discrete non inflammatory whitish or bluish deep-seated vesicles. These tense vesicles do not readily rupture

Subjective symptoms None

Etiology Occurs in middle-aged women who work in hot environments and perspire freely

Histopathology There are large dilated cystic cavities lined by two or more layers of epithelial cells in the cutis. The cysts develop as a result of sweat retention in the ducts of the eccrine sweat glands

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Miliaria crystallina (sudamina) syringoma

Therapy Puncture each lesion with a sharp needle to release the fluid

Impetigo Contagiosa

Synonym Impetigo impetigo vulgaris.

Sites of predilection Face especially about the mouth ears, and nose

Objective symptoms Begins as a flaccid or tense well defined vesicle originating on normal skin or on an erythematous base The vesicle is filled with clear yellowish fluid which becomes pustular After a few days the lesion is covered with a thick yellow (honey) crust The lesions may become confluent and spread with the development of more lesions because of the contagious nature and autoinoculability of the disease Annular lesions may occur

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Subjective symptoms Itching and burning

Etiology *Staphylococcus aureus* and *albus* and *Streptococcus pyogenes* Usually spread in schools and camps by direct contact with towels, etc May also occur secondary to some other underlying dermatosis such as pediculosis capiti pediculosis pubis, scabies and other pruritic conditions

Histopathology A subcorneal vesicle containing polymorphonuclear leukocytes, lymphocytes, fibrin and bacteria. The upper third of the cutis contains an inflammatory infiltrate consisting



Fig 85 Impetigo co t giosa

Differential diagnosis Pemphigus vulgaris erythema multiforme bullosum

Therapy None specific. Systemic and local steroid therapy for the ocular involvement may be of some value

Pemphigoid Bullous

Synonym None

Sites of predilection Axillae groins, and flexor surfaces of forearms May involve other areas of skin as well.

Objective symptoms Tense bullae of considerable size which do not break as easily as the blebs of pemphigus vulgaris. The denuded areas resulting from the rupture *of* some *of* the bullae heal rapidly and do not spread There may be erythematous patches where the bullae become confluent forming a serpiginous configuration or the blebs may be grouped as in dermatitis herpetiformis Mucous membrane involvement may occur but the blisters heal rapidly The condition occurs in adults 60 years of age or older but may develop in young children. The disease may persist for months to many years with remissions and exacerbations.

Subjective symptoms. Itching is usually moderate to severe but may be entirely absent In older patients the general health may be impaired

Etiology Unknown

Histopathology The picture is similar to that of dermatitis herpetiformis Bullous pemphigoid may be bullous form of dermatitis herpetiformis

Diagnostic aids. Biopsy

Relation to system disease None

Differential diagnosis Pemphigus vulgaris dermatitis herpetiformis erythema multiforme bullosum

Therapy Sulfapyridine may be of value but is not effective as when used in dermatitis herpetiformis Systemic steroid therapy may also be useful

Pemphigus Chronic Benign Familial

Synonym Hailey and Hailey' disease

Sites of predilection Neck axillae and crural area

Objective symptoms Vesicles and bullae, with crusted erosions are seen over the affected areas. The lesions may spread peripherally producing a circinate or serpiginous border There are relapses and remissions. The condition runs a chronic course

Subjective symptoms Mild to moderate itching. Symptoms may be more severe in warm, humid weather

Etiology Unknown.

Histopathology Large bullae develop separating the basal layer from the rest of the epidermis. Acantholytic cells, some of which show keratinization, are present Dyskeratosis occurs occasionally *Corps ronds* are not a constant feature

Diagnostic aids. Biopsy

Relation to system disease None

Differential diagnosis Contact dermatitis intertrigo dermatitis herpetiformis pemphigus vulgaris.

Therapy Local application of saline or boric acid compresses followed by a steroid lotion or ointment may be of value

Pemphigus Vulgaris

Synonym. Pemphigus vulgaris malignus.

Sites of predilection Mucous membranes scalp face neck, extremities and trunk.

Objective symptoms. The bullae are tense at first but become flaccid as they increase in size Bullae may arise from normal-appearing skin or on an erythematous base The fluid content is serous at first but may become purulent or hemorrhagic The flaccid blisters rupture easily to form denuded lesions which involve large areas. The lips, buccal mucosa tongue palate, pharynx, and larynx are involved. The mucous membranes of the conjunctivae nostrils, vulva, and anal region may also be affected The *Nikolsky sign* is elicited by making pressure with the finger over so-called normal skin and rubbing off the epidermis.

Subjective symptoms. The eruption is preceded or accompanied by malaise chills and fever slight to moderate itching and burning, and soreness of the involved areas. When lesions are present in the oral cavity swallowing and talking may become difficult The condition occurs most

dilated lymphatics or cysts lined by a single layer of endothelial cells. The cysts contain coagulated lymphocytes

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Herpes simplex herpes zoster dermatitis venenata

Therapy Surgical excision desiccation or carbon dioxide snow are of value in the destruction of small lesions. Conventional x ray and radium therapy are curative

Miliaria Crystallina

Synonym Sudamina

Sites of predilection Neck trunk and extremities.

Objective symptoms Discrete pin point to pin head size translucent thin walled vesicles containing a droplet of clear sweat They develop and involute in a short period of time leaving a slight superficial scale

Subjective symptoms Mildly pruritic

Etiology Result from excessive sweating associated with fever steam baths, exercise etc

Histopathology The superficial vesicles are situated in the stratum corneum in direct communication with the sweat ducts. The orifices of the ducts are plugged

Diagnostic aids Biopsy history and physical examination

Relation to systemic disease May be associated with any disease which causes fever Drug sensitivity may produce the eruption

Differential diagnosis Varicella miliaria rubra

Therapy Oatmeal baths calamine lotion dusting powders. Place patient in a cool well ventilated room

Miliaria Rubra

Synonym Prickly heat heat rash summer rash

Sites of predilection Neck trunk and extremities

Objective symptoms Numerous erythematous pin point to pin head sized discrete closely aggregated vesicles, vesicopapules and papules

Subjective symptoms Stinging prickling itching or burning in the affected areas.

Etiology High temperature and humidity associated with increased or profuse perspiration Possibly associated with food allergies

Histopathology Keratin plugs in the sweat duct orifices and distention of the sweat ducts in the epidermis and upper cutis. A lymphocytic infiltrate surrounds the sweat ducts in the upper cutis.

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Urticaria varicella eczema dermatitis venenata

Therapy Remove to cool environment Wear light loosely fitting clothing Avoid fruits, alcoholic beverages highly seasoned foods. Apply talc calamine lotion or other cooling lotions Colloidal baths are of value

Pemphigoid Benign Mucous Membrane

Synonym Pemphigus of the mucous membranes ocular pemphigus pemphigus conjunctivae

Sites of predilection Conjunctivae buccal mucosa pharynx larynx esophagus nasal mucosa penis, vulva and anus. In 50 per cent of the patients the skin is also involved

Objective symptoms Lesions begin on the buccal mucosa as vesicles and result in denuded area The lips are rarely involved Scars form in the mouth and involvement of the larynx results in hoarseness. When adhesions occur in the esophagus, strictures and stenosis develop with impairment in eating and swallowing Adhesions may also complicate genital involvement There may be scarring and shrinking of the conjunctivae resulting in corneal damage with ulceration and opacities.

Subjective symptoms. Scarring of the conjunctivae and corneal opacities may lead to partial blindness Burning smarting and photophobia may be an early complaint when the eyes are involved Hoarseness and difficulty in swallowing are experienced when the mouth throat larynx and esophagus are involved

Etiology Unknown

Histopathology Subepidermal bulla There is absence of acantholysis in the epidermis. Marked inflammatory infiltration is present with subsequent fibrosis of the outer dermis.

Diagnostic aids Biopsy

Relation to systemic disease None

volved in this type The course of the disease is the same as that of pemphigus vulgaris

2. *Pemphigus foliaceus* The lesions are superficial bullae which leave shallow erosions. There are also areas of erythema, scaling, oozing and crusting. The denuded areas are more superficial than those of pemphigus vulgaris. At first the eruption may be limited to the scalp face and portions of the back and chest but as the condition progresses most of the body surface is involved. In this type of pemphigus the patients are usually free of oral lesions. The disease runs a chronic course for a period of many years

3. *Pemphigus erythematodes* (Senear Usher syndrome) This variant of pemphigus may start with a butterfly lesion on the face and resembles lupus erythematosus The disease may eventuate into pemphigus vulgaris. The bullae are flaccid and, when they become crusted and impetiginized resemble seborrheic dermatitis. The condition usually runs chronic but relatively benign course

Scabies

Synonym "The itch

Sites of predilection. Interdigital spaces of the fingers flexor surfaces of the wrists and forearms, the elbows, anterior folds of the axillae the breasts, buttocks, male genitalia, and the abdomen Rarely occurs on the face May occur on the feet in infants

Objective symptoms. Scabies a rare contagious disease has almost become extinct in the past 5 years The initial lesion is an irregular vesicle which varies from 1 to mm. in diameter Traversing the center of some of these lesions there is a black dotted line or "burrow" composed of the eggs and fecal matter of the parasite Intact vesicles are found only on the palms and between the fingers. Papules, pustules crusts, and excoriations occur elsewhere on the body Secondary pyogenic infection frequently occurs.



Fig 89 Scabies

Subjective symptoms Severe itching especially at night when the patient is in bed.

Etiology Sarcoptes scabiei The female burrows into the skin especially at night where she deposits eggs and feces

Histopathology The burrow is located in the horny layer and the head of the mite is buried in the prickle cell layer The vesicles occur because of edema of the prickle cell layer

Diagnostic aids. Confirmation of diagnosis by microscopic examination of vesicle contents for presence of parasite

Relation to systemic disease None

Differential diagnosis Papular urticaria contact dermatitis and reactions atopic dermatitis.

Therapy

1 Isolate the patient Treat all infested contacts.

2. Bathe with soap and water and pat the skin dry

3. Apply 20 per cent benzyl benzoate emulsion from the neck to the toes twice daily for 3 days.

4 Boil all clothing and bed clothing in hot soapy water

Alternate effective medications are 5 to 15 per cent sulfur in petrolatum or 5 per cent each of balsam of Peru and sulfur in petrolatum.

Varicella

Synonym Chicken pox

Sites of predilection Face trunk and scalp

Objective symptoms. The condition, which has an acute onset is initiated with a macular eruption which rapidly becomes papular and then vesicular in a 24-hour period. Discrete scattered vesicles measuring 2 to 4 mm. in diameter first appear on the face The vesicles are thin-walled, translucent and later become turbid. They have the so-called dew-drop ap-





Fig 87 Pemphigus vulgaris

commonly in the middle-aged group and is somewhat more prevalent in the Jewish race

Etiology Unknown

Histopathology Tzanck cells are present in a unilocular intra-epidermal vesicle There is little or no inflammatory reaction in the cutis

Diagnostic aids Biopsy of a fresh vesicle or bullous lesion preferably one not over 24 hours old

Relation to systemic disease Pemphigus vulgaris is a serious systemic illness

Differential diagnosis Erythema multiforme bullosum dermatitis herpetiformis (Duhring s disease) bullous impetigo contagiosa

Therapy Systemic steroid therapy is a lifesaving measure in this disease and without its use the prognosis is gra The drug must be given in adequate do and with utmost care and supervision In addition to systemic steroid therapy the general health of the patient must be maintained by good nursing care high calorie diet multivitamin therapy blood transfusions etc. Use 1 per cent phenol crystals in olive oil or cottonseed oil locally Emollient baths may be comforting

Other Varieties of Pemphigus

1 *Pemphigus vegetans* This is a variant of pemphigus vulgaris which at first cannot be differentiated from it As the disease progresses the denuded areas develop vegetations or papillomatous, hypertrophic surfaces covered with pustules The mucous membranes are also in-





Fig 88 Pemphigus foliaceus

volved in this type The course of the disease is the same as that of pemphigus vulgaris

2. *Pemphigus foliaceus* The lesions are superficial bullae which leave shallow erosions. There are also areas of erythema scaling, oozing and crusting. The denuded areas are more superficial than those of pemphigus vulgaris At first the eruption may be limited to the scalp, face and portions of the back and chest but, as the condition progresses most of the body surface is involved. In this type of pemphigus the patients are usually free of oral lesions The disease runs a chronic course for a period of many years.

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Sites of pred lection Interdigital spaces of the fingers flexor surfaces of the wrist and forearms, the elbows, anterior folds of the axillae the breast buttocks, male genitalia, and the abdomen. Rarely occurs on the face May occur on the feet in infants

Objectiv symptoms Scabies a rare contagious disease has almost become extinct in the past 5 years The initial lesion is an irregular vesicle which ranges from 1 to 3 mm in diameter Trav



F 80 Scabies

ersing the center of some of these lesions there is a black dotted line or "burrow" composed of the eggs and fecal matter of the parasite In fact vesicles are found only on the palms and between the fingers. Papules pustules crusts, and excoriations occur elsewhere on the body Secondary pyogenic infection frequently occurs.

Subjective symptoms. Severe itching especially at night when the patient is in bed.

Etiology Sarcoptes scabiei The female burrows into the skin, especially at night where she deposits eggs and feces

Histopathology The burrow is located in the horny layer and the head of the mite is buried in the prickle cell layer The vesicles occur because of edema of the prickle cell layer

Diagnost c aids. Confirmation of diagnosis by microscopic examination of vesicle contents for presence of parasite

Relation to systemic disease None

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V ricella

Synonym Chicken pox.

Sites of pred lection Face trunk, and scalp

Objective symptoms The condition, which has an acute onset is initiated with a macular eruption which rapidly becomes papular and then vesicular in a 4 hour period. Discrete scattered vesicles measuring 2 to 4 mm. in diameter first appear on the face The vesicles are thin-walled translucent and later become turbid. They have the so-called "dew-drop ap-

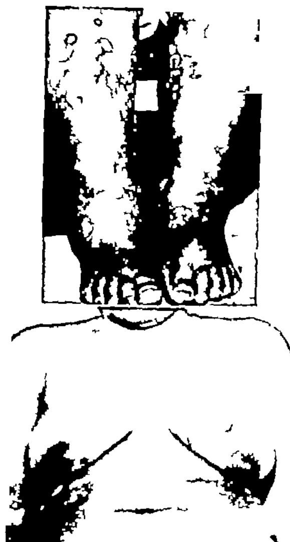


Fig 87 Pemphigus vulgaris

commonly in the middle-aged group and is somewhat more prevalent in the Jewish race

Etiology Unknown

Histopathology Tzanck cells are present in a unilocular intra-epidermal vesicle There is little or no inflammatory reaction in the cutis

Diagnostic aid Biopsy of a fresh vesicle or bullous lesion preferably one not over 24 hours old

Relation to systemic disease Pemphigus vulgaris is a serious systemic illness

Differential diagnosis Erythema multiforme bullosum dermatitis herpetiformis (Duhring s disease) bullous impetigo contagiosa

Therapy Systemic steroid therapy is a lifesaving measure in this disease and without its use the prognosis is grave The drug must be given in adequate dosage and with utmost care and supervision In addition to systemic steroid therapy the general health of the patient must be maintained by good nursing care high caloric diet multivitamin therapy blood transfusions etc Use 1 per cent phenol crystals in olive oil or cottonseed oil locally Emollient baths may be comforting

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Synonym. "The itch.

Sites of predilection Interdigital spaces of the fingers, flexor surfaces of the wrists and forearms, the elbows anterior folds of the axillae the breast buttocks, male genitalia, and the abdomen Rarely occurs on the face May occur on the feet in infants

Objective symptoms. Scabies a rare contagious disease has almost become extinct in the past 5 years. The initial lesion is an irregular vesicle which varies from 1 to 5 mm. in diameter Traversing the center of some of these lesions there is a black dotted line or "burrow composed of the eggs and fecal matter of the parasite In tact vesicles are found only on the palms and between the fingers. *Papules*, pustules, crusts, and excoriations occur elsewhere on the body Secondary pyogenic infection frequently occurs.



F 80 Scabies

Subjective symptoms. Severe itching, especially at night, when the patient is in bed

Etiology *Sarcoptes scabiei* The female burrows into the skin especially at night where she deposits eggs and feces.

Histopathology The burrow is located in the horny layer and the head of the mite is buried in the prickle cell layer The vesicles occur because of edema of the prickle cell layer

Diagnostic aids Confirmation of diagnosis by microscopic examination of vesicle contents for presence of parasite

Relation to systemic disease None

Differential diagnosis Papular urticaria contact dermatitis; "id reactions atopic dermatitis

Therapy

1 Isolate the patient Treat all infested contacts.

2 Bathe with soap and water and pat the skin dry

3 Apply 20 per cent benzyl benzoate emulsion from the neck to the toes, twice daily for 3 days

4 Boil all clothing and bed clothing in hot soapy water

Alternate effective medications are 5 to 15 per cent sulfur in petrolatum, or 5 per cent each of balsam of Peru and sulfur in petrolatum.

Varicella

Synonym Chicken pox

Sites of predilection Face trunk and scalp

Objective symptoms. The condition, which has an acute onset is initiated with a macular eruption which rapidly becomes papular and then vesicular in a 24-hour period. Discrete scattered vesicles, measuring 2 to 4 mm. in diameter first appear on the face The vesicles are thin-walled, translucent and later become turbid. They have the so-called "dew-drop ap-



Fig 90 Varicella

pearance with an erythematous areola The lesions appear in successive crops and show varying stages of development from a fresh vesicle to a drying crusted lesion Central umbilication develops in the lesions prior to involution Healing is followed by pitted scars (pock marks) Scattered vesicles occur on the buccal mucosa or the hard or soft palate Involution of the individual vesicles usually begins after 48 hours.

Subjective symptoms There may be prodromal symptoms of coryza slight elevation of temperature and malaise The eruption is accompanied by pruritus

Etiology A filtrable virus identical with the virus which causes herpes zoster

Histopathology Unilocular vesicles with large multinucleated balloon cells are seen within the epidermis. There is a sparse leukocytic infiltration occupying the upper portion of the cutis.

Diagnostic aids Biopsy tissue culture history and physical examination

Relation to systemic disease Cerebral complications such as encephalitis have been reported Pneumonia middle ear infections cellulitis and septicemia are also complications of varicella

Differential diagnosis. Variola impetigo contagiosa folliculitis drug eruptions.

Therapy Isolation bed rest antipyretics and fluids Antipruritic lotions locally for relief of itching

Varicelliform Eruption, Kaposi's

Synonym None

Sites of predilection Face neck shoulders upper chest and upper arms

Objective symptoms Occurs on eczematous areas and also normal skin It is usually seen in patients with atopic eczema or a history of atopy Groups of vesicles and pustules, some showing umbilication occur on the sites of predilection. Crusting occurs, with some residual scarring. Fever occurs about 24 hours before the eruption makes its appearance and continues for a week or more The face is usually the area most extensively affected and may be edematous especially in the periorbital region The cornea may also be involved with ulcer formation

Subjective symptoms Elevated temperature headache and toxicity

Etiology Herpes simplex virus has been demonstrated

Histopathology Vesiculation and pustulation with reticular and balloon cell degeneration Contained within the degenerated epidermal cells one may see inclusion bodies A moderate to severe inflammatory reaction is present in the cutis.

Diagnostic aids Recovery of the herpes simplex virus, tissue culture biopsy history and physical examination

Relation to systemic disease The disease may be fatal Involvement of the eye with corneal ulceration leads to impairment of vision

Differential diagnosis Eczema vaccinatum (generalized vaccinia) varicella and variola

Therapy Nonspecific. Bed rest cool, normal saline compresses to the affected areas, fluid and sedation are indicated. If there is involvement of the cornea the patient should be under the care of an ophthalmologist

Chapter 18

PUSTULAR ERUPTIONS

Acne Varioliformis

Synonyms. Acne necrotica, acne atrophica, acne frontalis.

Sites of predilection. Forehead and scalp.

Objective symptoms. The primary lesion is a superficial, dark reddish or brownish papulopustule. The follicular lesions are occasionally pierced by hairs. Many of the pustules are umbilicated and crusted. When the lesions heal, superficial pitted scars remain. The lesions appear in crops and recur periodically for many years. This condition, which is comparatively rare, occurs primarily in adults.

Subjective symptoms. Mild itching.

Etiology. Unknown.

Histopathology. Polymorphonuclear cellular infiltration about the pilosebaceous apparatus. Small central areas of necrosis and subsequent scar formation.

Diagnostic aids. History and physical examination, biopsy.

Relation to systemic disease. None.

Differential diagnosis. Acne vulgaris, impetigo contagiosa, variola, varicella, pustular syphiloderm.

Therapy. Antibiotic ointments or lotions locally. Systemic medication is rarely necessary.

Acne Vulgaris

Synonyms. Acne, pimples.

Sites of predilection. Face, neck, shoulders, chest and buttocks.

Objective symptoms. This is a chronic inflammatory disease of the pilosebaceous apparatus, characterized by papules, pustules, and nodules and associated with seborrhea oleosa and comedones. In the *superficial* type there are few to numerous conical or round, pink to reddish papules and pustules varying in size from 2 mm. to 3 mm. in diameter. Numerous comedones are present, and the skin is usually very oily. In the deep indurated type, *acne conglobata*, there are large, dull red or bluish, cystic lesions, indolent abscesses and discharging sinuses which heal slowly, leaving dense scars.

Subjective symptoms. Pain on pressure. Slight itching or burning.

Etiology. Unknown. Acne occurs most commonly between the ages of 12 and 30 years. Hormone imbalance contributes to the production of acne.

Histopathology. Perifollicular inflammation. Abscesses surrounded by a dense inflammatory infiltrate of lymphocytes and polymorphonuclear leukocytes.

Diagnostic aid. Biopsy, history and physical examination.

Relation to systemic disease. None. The cosmetic defect may produce serious mental illness.

Differential diagnosis. Actinomycosis, bromide and iodide intoxication, scrofuloderma, acne-form eruptions produced by petroleum products.

Therapy. *Systemic treatment.* The tetracyclines may be of value in selected cases. Vitamin A, 50,000 units four times daily.

Dietary restrictions include the elimination of oily foods, nuts, chocolate, carbonated beverages, and fried foods.

Local applications of colloidal sulfur lotions may be of value. Ultraviolet therapy and conventional x-ray treatments are adjunctive modalities of treatment. See instructions for acne in the chapter on Therapy.

Actinomycosis

Synonym Lumpy jaw

Sites of predilection Face neck thorax and tongue

Objective symptoms The infection usually begins in the mouth and the skin lesions are secondary Deep subcutaneous slowly developing dusky red nodules rupture forming sinuses in the skin from which exude a purulent discharge containing tiny whitish or yellowish granules (sulfur granules)

Subjective symptoms Pain especially on mastication

Etiology *Actinomyces bovis* and other fungi

Histopathology Deep nodular infiltrations with granulation tissue epithelioid cells plasma cells and giant cells The ray fungus is present in the infiltrate

Diagnostic aids Demonstration of ray fungus by direct examination culture on Sabouraud s medium biopsy history and physical examination

Relation to systemic disease The fungus may invade internal organs producing generalized involvement

Differential diagnosis Furuncle carbuncle blastomycosis tuberculosis cutis late syphilis (gumma)

Therapy Penicillin in adequate dosage may be curative Chloramphenicol is of value Sulfonamides may also be useful

Anthrax

Synonym Malignant pustule wool sorter s disease

Sites of predilection Face and extremities.

Objective symptoms The primary lesion develops as a reddish papule at the site of inoculation A bleb forms over this lesion and the involved area becomes edematous and indurated The lesion assumes the characteristics of a discharging carbuncle with suppurative satellite adenopathy Metastatic abscesses frequently develop Vesicles and pustules occur about the periphery of the crusted necrotic area

Subjective symptoms This is a serious generalized constitutional illness Systemic symptoms include chills fever and malaise Itching, burning and pain occur at the site of the lesions

Etiology *Bacillus anthracis* Infection usually develops in persons who handle hides or infected animals Infection may result from careless handling of infected dressings.

Histopathology Numerous bacilli are present in the sub-papillary vascular net In the corium and subcutaneous tissue there is vascular dilatation and interstitial edema Collagen bundles are swollen and split Marked generalized leukocytic infiltration is present

Diagnostic aids Biopsy history and physical examination culture

Relation to systemic disease The primary lesion is evidence of a generalized systemic illness Fatal termination may result from overwhelming infection

Differential diagnosis Furunculosis carbunculosis

Therapy Chloramphenicol the tetracyclines, and penicillin are of value given in adequate dosage early in the course of the illness

Bacterid Pustular

Synonym Pustular psoriasis

Sites of predilection Hands and feet

Objective symptoms The condition begins on the palmar and plantar surfaces as deep-seated small vesicles (1 to 2 mm. in diameter) which become pustules. Eventually practically all the lesions become pustular Tiny hemorrhagic punctae commonly develop among the pustules In extensive cases the pustules coalesce to form large honey-combed lesions in the epidermis. When the pustules rupture or dry scaling and crusting occur New pustules usually appear in crops and are accompanied by marked pruritus. When the condition becomes quiescent adherent scaling is the predominant feature

Subjective symptoms Itching burning and pain

Etiology Many investigators feel that this condition is caused by a focus of infection The contents of the lesions are sterile This may be an allergic reaction to staphylococcic or streptococcic infections

Histopathology There are pustules in the epi-

dermis with a slight inflammatory reaction in the cutis. The pustules contain numerous leukocytes and epithelial cell

Diagnostic aids. Biopsy culture history and physical examination.

Relation to systemic disease No specific relationship

Differential diagnosis Pustular psoriasis dermatitis repens epidermophytosis

Therapy A complete survey to rule out foci of infection, cold Burow s solution dressings (diluted 1 32) hydrocortisone or other steroid ointment or lotions may be of value Radiation therapy is seldom of value

Blastomycosis

Synonym Dermatitis blastomycetica North American blastomycosis Gilchrist disease

Sites of predilection Face hands wrist and forearms May occur at any site

Objective symptoms The fully developed lesion is chronic slowly progressive granuloma characterized by the formation of thick crusts, verrucous vegetations and draining sinuses The lesion usually begin as a papule or papulopustule which spreads peripherally and is covered with a crust The pustules coalesce to form a verrucous granuloma Thick mucoid pus is present under the crusts or exudes through the sinuses The central portion of the lesion involutes and forms a thick scar Small pustules are present in the granulomatous margin The lesions spread by auto-inoculation. Papillomatous projections are pronounced in lesions on the hands and feet The lesions are vascular and bleed after slight trauma Lesions may spread by lymphatic extension.

Subjective symptoms. Little or no pain.

Etiology Blastomyces dermatitidis.

Histopathology Debris consisting of pus, blood, and epithelial cells is present on the surface The horny layer may be destroyed or may extend in thickened masses between distorted papillae Miliary abscesses containing the *Blastomyces* are found throughout the epidermis and cutis Pseudoepitheliomatous hyperplasia is present





F 91 Blastomycosis

Diagnostic aids History and physical examination biopsy culture Intradermal test with a standardized vaccine (0 1 cc injected intradermally) The test is read at 12 4 and 48 hours.

Relation to systemic disease This is a progressive disease in which all organs may be involved.

Differential diagnosis. Tuberculosis verrucosa cutis granuloma inguinale drug eruptions gumma chronic pyodermas.

Therapy Stilbamidine or 2-hydroxy stilbamidine

are the drugs of choice Amphotericin B is also of value

Bromoderma

Synonym Drug eruption dermatitis medicamentosa

Sites of predilection Face trunk and lower extremities

Objective symptoms The most common lesions are follicular pustules which vary from 2 to 6 mm in diameter The eruption resembles acne vulgaris but there are no comedones Granulomatous lesions occur most frequently on the lower extremities, although they may develop on the face in infants The granulomatous lesions may coalesce to form large areas, which become suppurative crusted or vegetative There is a striking resemblance to the lesions of blastomycosis

Subjective symptoms Itching and burning

Etiology Hypersensitivity to bromide Bromides are contained in some commercially available headache remedies.

Histopathology Follicular lesions are nonspecific pustules. The granulomatous lesions have a nonspecific picture

Diagnostic aids Biopsy blood bromide level history and physical examination

Relation to systemic disease The condition that necessitated continuous consumption of bromides Mental illness.

Differential diagnosis Acne syphilis furuncles blastomycosis.

Therapy The ingestion of bromides must be discontinued Sodium chloride given by mouth and intravenously will replace the bromide in the blood Care must be exercised in giving hypertonic intravenous saline to prevent shock Oral sodium chloride will replace the bromide but much more slowly

Carbuncle

Synonym. None

Sites of predilection Back of the neck may also occur on the trunk and extremities.

Objective symptoms The lesion is usually a single raised indurated acutely inflamed red or reddish-blue fluctuant pustule which varies in size from 1 to 5 cm It has two or more openings which discharge thick yellow pus. The central part of the lesion is composed of one or more large necrotic pustular masses (core)

Subjective symptoms Pain Systemic symptoms include chills and fever

Etiology Staphylococci

Histopathology There is a deep circumscribed, pyogenic infection extending well into the corium

Diagnostic aids History and physical examination culture of exudate urinalysis blood sugar

Relation to systemic disease Diabetes mellitus may predispose to the development of carbuncles These lesions may also occur in leukemias or other debilitating diseases

Differential diagnosis Sebaceous cysts gumma deep mycotic granulomas.

Therapy Incision and drainage of fluctuant lesions. Systemic antibiotic therapy is indicated in extensive lesions. Use the drug indicated by disc or tube dilution sensitivity tests.

Coccidioidomycosis

Synonym Coccidioidal granuloma valley fever San Joaquin fever

Sites of predilection Face and upper extremities

Objective symptoms Primary cutaneous coccidioidomycosis is rare Pulmonary lesions are common in this serious, generalized illness. The earliest cutaneous lesion is a chancre or granuloma which may remain localized for several years Satellite lymphadenopathy eventually suppurates and forms sinuses The lesions spread slowly Nodular or circumscribed granulomas may develop

Erythema nodosum is a common allergic manifestation of pulmonary involvement The cutaneous lesions which complicate pulmonary involvement are not distinctive Large nodular lesions or granulomas develop on the legs hips, and buttocks These lesions become confluent suppurate and ulcerate Vegetative lesions may develop Pulmonary lesions are associated with malaise chill fever night sweat and severe headaches. The disease has a poor prognosis.

Etiology *Coccidioides immitis*

Histopathology A granuloma deep in the cutis Plasma cells, leukocytes, giant cell and epi

theboid cells form the dense infiltrate The organisms are present in the giant cells.

Diagnostic aids. History and physical examina tion culture biopsy intradermal skin tests.

Relation to systemic disease This is a serious systemic disease

Differential diagnosis Blastomycosis chromoblastomycosis gumma.

Therapy Amphotericin B is of value Use suppor tive measures.

Dermatitis Repens

Synonym Acrodermatitis continua of Hallopeau acrodermatitis perstans.

Sites of predilection. Hands and feet

Objective symptoms. The condition begin as a group of vesicles or vesicopustules which extend peripherally on an erythematous base Exfolia tion occurs, leaving an eroded or crusted area surrounded by an exfoliating margin in which there are deep seated vesicles and vesicopustules. New lesions continue to appear The condition is chronic and progressive Crust forma tion may be present.

Subjective symptoms. Burning, itching, and pain.

Etiology Staphylococcic or streptococcic infec tion complicating previously existing eczema tous eruptions.



F 92 Dermatitis repens

Histopathology Epidermal vesicles and abscesses are present These lesions usually do not extend into the corium but the inflammatory reaction does.

Diagnostic aids Culture of the exudate history and physical examination

Relation to systemic disease Usually none

Differential diagnosis Pustular psoriasis pustular bacterid dyshidrosis

Therapy Hot boric acid compresses or soaks followed by antibiotic ointment or lotion Local debridement of the exfoliating infected material Systemic antibiotic drugs may be indicated if the infection is severe or if cellulitis and lymphangitis develop

Ecthyma

Synonym Deep-seated impetigo contagiosa

Sites of predilection Legs, buttocks, hands, trunk and vulva

Objective symptoms The primary lesion is a vesicle or vesicopustule (1 to 3 cm in diameter) which enlarges peripherally The surface becomes covered with a thick adherent crust Removal of the crust reveals a shallow ulcer the base of which is bathed in pus. Healing takes place with scar formation

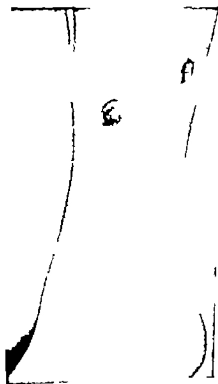


Fig 03 Ecthyma

Subjective symptoms Slight to severe pain.

Etiology Staphylococci Ecthyma may develop as a complication of dermatitis venenata scabies, or eczema

Histopathology Numerous abscesses involving the entire thickness of the epidermis and the upper portion of the cutis.

Diagnostic aids History and physical examination culture of the exudate

Relation to systemic disease None

Differential diagnosis Sporotrichosis gumma condyloma latum on the vulva chancroid.

Therapy Hot boric acid or normal saline compresses followed by applications of an antibiotic ointment or lotion Systemic antibiotic therapy may be necessary if the lesions are extensive

Eczema

Synonym Dermatitis

Sites of predilection Face scalp and upper extremities

Objective symptoms These pustular lesions always represent secondary pyogenic infection of a previously existing eruption Pustule formation may complicate vesicular eczema or develop as small pustules on an eczematous dermatitis. The areas are ill-defined confluent lesions which are covered with small yellowish or greenish-yellow pustules and pus crusts

Subjective symptoms Moderate to severe itching

Etiology This is a staphylococcic or streptococcic infection superimposed on a previously existing allergic dermatitis

Histopathology Nonspecific Superficial abscesses are present in the epidermis.

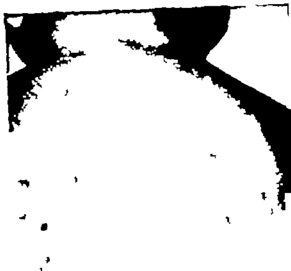
Diagnostic aids History and physical examination cultures

Relation to systemic disease Develops secondary to a pre-existing allergic dermatitis.

Differential diagnosis Impetigo pediculosis capitis, seborrheic dermatitis dermatitis herpetiformis pemphigus vulgaris

Therapy Treat the secondary pyogenic infection with hot boric acid compresses and local antibiotic ointments. Topical steroid antibiotic combination ointment and lotions are of value





F 95 Pustular folliculitis

F 94 Pyoderma complicating atopic eczema

Folliculitis

Synonym None

Sites of predilection Buttocks extensor surfaces of thigh trunk face

Objective symptoms The condition is characterized by the development of numerous superficial pustules which originate in hair follicles These lesions vary in size from 1 to 4 mm in diameter A hair shaft may pierce the pustule Follicular papules may be intermingled with the pustules

Subjective symptoms Pain mild itching

Etiology Pyogenic bacteria. The condition may be allergic reaction to ingested or injected substance

Histopathology Abscess formation in and about the hair follicle

Diagnostic aid Culture history and physical examination

Relation to systemic disease A food or drug sensitivity reaction may precipitate the eruption.

Differential diagnosis Impetigo contagiosa varicella acne vulgaris papulonecrotic tuberculid

Therapy Hot compresses antibiotic ointments and lotions proper hygiene removal of causative factor

Furuncl

Synonym Boil

Sites of predilection May occur at any site

Objective symptoms The initial lesion is an acute tender circumscribed, deep seated, follicular pustule which varies in size from 2 mm. to 1 cm in diameter Perifollicular erythema and induration develop The central area becomes soft and develops a yellow top When the furuncle ruptures, a thick yellow greenish or bloody pus is discharged followed by the core Furuncles heal with scar formation A blind boil is a furuncle which does not fully develop and rupture

Subjective symptoms Pain

Etiology Staphylococci.

Histopathology A deep abscess formed by necrotic material, leukocytes and colonies of staphylococci The lesions begin in and around the pilosebaceous apparatus eventually forming abscesses The inflammatory cells are densely

packed In chronic lesions lymphocytes plasma cells, and giant cells may be present

Relation to systemic disease Diabetes alcoholism anemias and other debilitating diseases.

Differential diagnosis Carbuncle sebaceous cysts.

Therapy Systemic antibiotic selection should be based on disc or tube dilution sensitivity tests if lesions are resistant to empirical therapy Hot compresses and local antibiotic therapy may be of value Fluctuant lesions must be drained surgically

Hidradenitis Suppurativa

Synonym Abscess of the apocrine sweat gland axillary abscesses

Sites of predilection Axillae lesions occasionally occur about the external genitalia and the areolae of the breasts.

Objective symptoms The lesions begin as small subcutaneous nodules, which may involute spontaneously or develop into abscesses. Adjoining lesions may coalesce to form band like indurations Sinus tracts may develop and drain for many months

The condition occurs more frequently in women



Fig 96 Hidradenitis suppurativa

Subjective symptoms Varying degrees of pain.

Etiology Unknown May be associated with the use of deodorants

Histopathology Variable leukocytic infiltration surrounding the lumen of the apocrine gland. When the infection is of long standing, there is a perivascular infiltration of plasma cells and lymphocytes.

Diagnostic aids. Culture history and physical examination

Relation to systemic disease None has been established

Differential diagnosis. Furuncle cellulitis erysipelas lymphadenitis

Therapy Systemic antibiotic therapy may be indicated Local incision and drainage of the abscesses Avoidance of deodorants other sensitizing agents and irritants

Kerion

Synonym Kerion celsi tinea kerion

Sites of predilection Scalp

Objective symptoms There are usually one or more raised, boggy inflammatory crusted lesion present Pus exudes from the follicles and the hairs fall out The lesions begin as a group of follicular pustules in an area of tinea capitis. Healing may be followed by scar formation and alopecia The pyogenic infection usually destroys the fungus infection

Subjective symptoms Pain

Etiology Pyogenic infection complicating a fungus infection of the scalp The condition may represent an allergic phenomenon

Histopathology An inflammatory process in the upper part of the corium and about the follicles. The causative organism may be present in abundance within and outside of the hair follicle

Diagnostic aids Culture for both bacteria and fungi

Relation to systemic disease None

Differential diagnosis Impetigo contagiosa furuncles.

Therapy Hot saline or boric acid compresses and locally applied antibiotics. If the process is very severe systemic antibiotic therapy is indicated

Pyoderma Faciale

Synonym. None.

Sites of predilection Face.

Objective symptoms There are numerous confluent abscesses and cystic lesions containing thick, yellow or greenish pus, on the cheeks and chin. The fluctuant lesions rupture and form sinuses. The skin surface over the lesions is red or bluish red The condition most frequently develops in young women. This dermatosis is differentiated from acne by the absence of comedones and the lack of lesions on the chest and back

Subjective symptoms Pain The cosmetic defect is productive of emotional trauma

Etiology Pyogenic bacteria.

Histopathology Deep seated abscesses and sinuses with acute and chronic cellular infiltration.

Diagnostic aids Culture and sensitivity tests history and physical examination

Relation to systemic disease None has been established.

Differential diagnosis. Acne conglobata rosacea bromoderma.

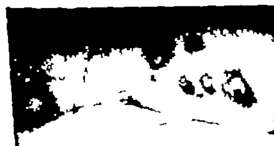
Therapy Hot saline or boric acid compresses Systemic therapy using the antibiotic of choice indicated by sensitivity test Incision of the larger fluctuant lesion is necessary Fractional ray treatment may be of value

Sporotrichosis

Synonym None

Sites of predilection Extremities.

Objective symptoms The causative organism is inoculated by trauma in gardeners florists, and laborers The initial lesion is usually a small nodule which breaks down to form the sporotrichal chancre at the site of inoculation Numerous indolent painless, nodular granuloma develop along the course of the ascending lymph vessels. These granulomas eventually become fluctuant and form abscesses and ulcers. Lesions may develop in bone or viscera



F 9 Sporotrichosis

Subjective symptoms. Vary with the extent and severity of the lesions.

Etiology Sporotrichum schenckii

Histopathology An infectious granuloma with the formation of deep abscesses, sinuses and ulcers. The chronic inflammatory infiltrate is composed of epithelioid cells, giant cells plasma cells and lymphocytes.

Diagnostic aids. Culture on Sabouraud s medium history and physical examination.

Relation to systemic disease Involvement of the skeletal system lungs, and other organs may occur

Differential diagnosis Tuberculosis cutis blastomycosis syphilis bacterial infections tularemia.

Therapy Potassium iodide 4 to 6 gm. daily continued for one month after all lesions have healed. Local application of 3 per cent tincture of iodine to the granulomas.

Sycosis Barbae

Synonym. Sycosis vulgaris Barber's itch.

Sites of predilection. Bearded portion of the face and neck.

Objective symptoms This is a chronic eruption of the bearded area. It begins as scattered follicular pustules from which hairs protrude The lesion spread and, in a brief time, cover large areas. The skin between the pustules becomes red and scaly These pustules are ruptured by washing or shaving and the entire area may become covered with serous and pus crusts. The hairs become loosened in the follicles. Healing takes place with scar formation which may produce a large area, devoid of hair and surrounded by papules and pustules.

Subjective symptoms. Itching.

Etiology Staphylococci The condition may be



Fig 68 Sycosis barbae

caused by infection of ingrown hairs Bacterial infection may complicate allergic contact dermatitis caused by after-shave lotion shaving cream etc

Histopathology A perifollicular leukocytic infiltrate is present The entire follicle may become involved In chronic lesions, lymphocytes, plasma cells, and giant cells appear

Diagnostic aids History and physical examinations culture and sensitivity tests

Relation to systemic disease None

Differential diagnosis Tinea sycosis lupus vulgaris impetigo contagiosa eczema acne vulgaris.

Therapy Hot boric acid compresses followed by antibiotic ointments In resistant cases systemic antibiotic therapy may be necessary The shaving hygiene should be corrected

Syphilis Pustular

Synonym Lues the pox rupial syphilid frambesiform syphilid ecthymatous syphilid

Sites of predilection Chest back and face

Objective symptoms This is a late manifestation of secondary syphilis The primary lesion is a pustule arising on a reddish brown infiltrated base These pustules are small perifollicular numerous, and occur in groups Hard shotty discrete papulopustules, which rarely form groups also develop Untreated, involution is usually slow resulting in persistent crusted, superficial ecthymatous ulcers. Rupial syphilid is an ulcer covered with a thick oyster shell-like scale or crust

Subjective symptoms Itching

Histopathology These lesions show varying degrees of *perivascular infiltration consisting of round* cells and plasma cells Multinucleated giant cells and vascular occlusion may be present

Diagnostic aids Serologic tests for syphilis dark field examination from moist lesions.

Relation to systemic disease Syphilis is a systemic disease

Differential diagnosis Variola acne vulgaris varicella drug eruptions.

Therapy See syphilis in the chapter on Venereal Diseases

Tinea Barbae

Synonym Tinea sycosis barber's itch ringworm of the beard

Sites of predilection The bearded area

Objective symptoms This condition occurs most *frequently in farmers or animal handlers* The superficial type appears initially as pink scaly macules Follicular pustules appear in the periphery of the lesion The hairs become loosened in the follicles. Seropurulent crust formation occurs.

The deep type develops slowly producing nodular lesions and kerion like swellings (*Majocchi s granuloma*) Openings in the lesions drain thick mucoid pus. The hairs are easily extracted or may fall out

Subjective symptoms Itching tenderness, and pain

Etiology *Trichophyton mentagrophytes Microsporum canis Trichophyton violaceum* or *Trichophyton rubrum*

Histopathology There is deep perifollicular cellular infiltration and necrosis.

Diagnostic aids Culture on Sabouraud s medium

Relation to systemic disease None

Differential diagnosis Sycosis vulgaris impetigo contagiosa actinomycosis furuncles.

Therapy There is a tendency to spontaneous involution of lesions. Hot boric acid or saline compresses followed by topical application of antibiotic in the pustular type Griseofulvin may be of value on systemic administration

Vaccinia

Synonym Cowpox eczema vaccinatum

Sites of predilection. Generalized

Objective symptoms. This condition develops 4 to 10 days after vaccination in persons with atopic dermatitis or other eczematous eruptions It may also develop following contact with va ccination "take" in another person Vaccinia only develops in individual who have not been successfully vaccinated against smallpox. The eruption may occur on any part of the body

The lesions begin a large (1 to 1 5 cm in diameter) vesicles which umbilicate become globular pustules, then form crusts Healing takes place with scar formation

Subjective symptoms. Patients become seriously ill with chills, fever and general malaise

Etiology Cowpox virus

Histopathology Subepidermal vesicles and marked



Fig 97 Vaccinia

intracellular edema in the epidermis. Intra cellular inclusion bodies are present in the vesicles.

Diagnostic aids. Biopsy rabbit cornea inoculation tissue culture

Relation to systemic disease This is a generalized disease which may be complicated by ocular paralysis, postvaccinial retinitis and encephalitis Death may ensue.

Differential diagnosis Variola varicella

Therapy Supportive Prophylaxis demands that vaccination is contraindicated in atopic dermatitis.

Variola

Synonym Smallpox

Sites of predilection Generalized.

Objective symptoms An acute infectious and contagious disease characterized by the successive development of macules papules vesicles and pustules on the skin and mucous membranes. The first lesions to appear are numerous macules which become vesicles within 24 hours. These lesions umbilicate then become pustules. Unlike varicella, variola is characterized by a single crop of lesions which progresses through the successive stages of development at the same time When fully developed, the eruption consists of numerous, discrete shotty globular pustules 2 to 6 mm in diameter There is facial swelling and generalized erythema. These lesions later become crusted and eventually heal with pitted scars.

Subjective symptoms Prodromal symptoms of malaise headache and fever (103° to 105 °F) before the development of the exanthem. The patient is very ill and may lapse into a coma.

Etiology Virus.

Histopathology The primary lesion is an intraepidermal, multilocular vesicle which contains balloon cells and inclusion bodies (Guarnieri bodies)

Diagnostic aids History and physical examination tissue culture

Relation to systemic disease This is a generalized systemic disease which may have a fatal ter



Fig 68 Sycosis barbae

caused by infection of ingrown hairs Bacterial infection may complicate allergic contact dermatitis caused by after-shave lotion shaving cream etc

Histopathology A perifollicular leukocytic infiltrate is present The entire follicle may become involved In chronic lesion lymphocytes plasma cell and giant cells appear

Diagnostic aids History and physical examinations culture and sensitivity tests

Relation to systemic disease None

Differential diagnosis Tinea sycosis lupus vulgaris impetigo contagiosa eczema acne vulgaris

Therapy Hot boric acid compresses followed by antibiotic ointment In resistant cases systemic antibiotic therapy may be necessary The shaving hygiene should be corrected

Syphilid Pustular

Synonym Lues the pox rupial syphilid frambesiform syphilid ecthymatous syphilid

Sites of predilection Chest back and face

Objective symptoms This is a late manifestation of secondary syphilis The primary lesion is a pustule arising on a reddish brown infiltrated base These pustules are small perifollicular numerous, and occur in groups Hard shotty discrete papulopustules, which rarely form groups, also develop Untreated involution is usually slow resulting in persistent crusted, superficial ecthymatous ulcers. Rupial syphilid is an ulcer covered with a thick, oyster shell like scale or crust

Subjective symptoms Itching

Histopathology These lesions show varying degrees of perivascular infiltration con i ting of round cells and plasma cells. Multinucleated giant cells and vascular occlusion may be present

Diagnostic aids Serologic tests for syphilis dark field examination from moi t lesions

Relation to systemic disease Syphilis is a systemic disease

Differential diagnosis Variola acne vulgaris varicella drug eruptions

Therapy See syphilis in the chapter on Venereal Diseases

Tinea Barbae

Synonym Tinea sycosis barber s itch ringworm of the beard

Sites of predilection The bearded area

Objective symptoms This condition occurs most frequently in farmers or animal handlers The superficial type appears initially as pink scaly macules. Follicular pustules appear in the periphery of the lesions The hairs become loosened in the follicles. Seropurulent crust formation occurs.

The deep type develops slowly producing nodular lesions and kerion like swelling (*Majocchi s granuloma*) Openings in the lesions drain thick mucoid pus. The hairs are easily extracted or may fall out

Subjective symptoms Itching tenderness and pain

Etiology *Trichophyton mentagrophytes Microsporum canis Trichophyton violaceum* or *Trichophyton rubrum*

Histopathology There i deep perifollicular cellular infiltration and necrosis

Diagnostic aids Culture on Sabouraud medium

Relation to systemic disease None

Differential diagnosis Sycosis vulgaris impetigo contagiosa actinomycosis furuncles.

Therapy. There is a tendency to spontaneous involution of lesions Hot boric acid or saline compresses followed by topical applications of antibiotic in the pustular type Griseofulvin may be of value on systemic administration

Vaccinia

Synonym Cowpox eczema vaccinatum.

Sites of predilection Generalized.

Objective symptoms. This condition develops 4 to 10 days after vaccination in persons with atopic dermatitis or other eczematous eruptions. It may also develop following contact with a vaccination "take" in another person. Vaccinia only develops in individual who have not been successfully vaccinated against smallpox The eruption may occur on any part of the body

The lesions begin as large (1 to 1.5 cm. in diameter) vesicles which umbilicate become globular pustules, then form crust Healing takes place with scar formation

Subjective symptoms Patient become seriously ill, with chills, fever and general malaise

Etiology Cowpox virus

Histopathology Subepidermal vesicles and marked intracellular edema in the epidermis. Intracellular inclusion bodies are present in the vesicles.

Diagnostic aids Biopsy rabbit cornea inoculation tissue culture

Relation to systemic disease This is a generalized disease which may be complicated by ocular paralysis post vaccinal retu lti and encephalitis. Death may ensue

Differential diagnosis. Variola varicella

Therapy Supportive. Prophylaxis demand that vaccination is contraindicated in atopic dermatitis.



F 90 Vaccinia

Variola

Synonym Smallpox

Sites of predilection Generalized

Objective symptoms An acute infectiou and contagious disease characterized by the successive development of macules, papules, vesicles, and pustules on the kin and mucou membranes. The first lesions to appear are numerous macules which become vesicles within 24 hours. These lesions umbilicate then become pustules. Unlike varicella variola is characterized by a single crop of lesions which progresses through the successive stages of development at the same time When fully developed the eruption consists of numerous, discrete shotty globular pustules 2 to 6 mm in diameter There is facial swelling and generalized erythema. These lesions later become crusted, and eventually heal with pitted scars.

Subjective symptoms Prodromal symptoms of malaise headache and fever (102° to 105°F) before the development of the exanthem. The patient is very ill and may lapse into a coma

Etiology Virus.

Histopathology The primary lesion is an intraepidermal multilocular vesicle which contains balloon cell and inclusion bodies (Guarnieri bodies)

Diagnostic aids History and physical examination tissue culture

Relation to systemic disease This is a generalized systemic disease which may have a fatal ter

mination Renal failure and pulmonary complications occur

Differential diagnosis Pustular syphilis varicella generalized vaccinia

Therapy Strict isolation of the patient is necessary Vaccination is a preventive measure There is no specific therapy for smallpox. Use supportive measures

Chapter 19

ERUPTIONS INVOLVING THE SCALP AND OTHER HAIRY AREAS

Alopecia Areata

Synonym. Bald areas. If all hair is lost the condition is called alopecia universal or alopecia totalis.





Fig. 100. Above: Alopecia areata. Below: Alopecia areata in one sister and alopecia totalis in the other.

Sites of predilection. Scalp, beard, or generalized (alopecia totalis).

Objective symptoms. One or more circumscribed, round or irregular bald areas in which there is absence of any active inflammatory process. The involved area may be completely bald or a few scattered, discrete isolated hairs may be present. The lesions extend peripherally and occasionally all of the hair may be lost. When the hair begins to regrow it is usually fine and white. This growth is lost and is replaced by normal hair. There is a tendency to relapse.

Subjective symptoms. None except the emotional imbalance produced by the cosmetic defect.

Etiology. Unknown. The condition may be associated with emotional shock or psychogenic stimuli.

Histopathology. Atrophy of the hair follicles and sebaceous glands.

Diagnostic aids. Clinical appearance, serologic test for syphilis, history and physical examination.

Relation to systemic disease. Emotional imbalance, chronic systemic illness.

Differential diagnosis. Ringworm of the scalp, syphilitic alopecia, alopecia caused by febrile illnesses, seborrheic dermatitis.

Therapy. There is no specific treatment. Rest and relief from anxiety is essential. Systemic steroid therapy is to be avoided. Ultraviolet may be of value.

Alopecia Congenital

Synonym. Congenital ectodermal defect.

Sites of predilection. Scalp and other areas.

Objective symptoms. There may be complete or partial absence of hair on all parts of the body



FIG 101 Congenital ectodermal defect

(congenital ectodermal defect) If hair is present it is usually fine whitish lustreless, and occurs in scattered tufts Associated with this deformity there is partial or complete absence of sweating and sebum production and there is defective formation of the nails There is absence of any gross inflammatory process.

Subjective symptoms Due to lack of sweat glands these patients are unable to tolerate heat

Etiology A congenital defect

Histopathology Absence of hair follicles and a decrease in number or absence of sweat glands.

Diagnostic aids History and physical examination biopsy

Relation to systemic disease Associated with other congenital abnormalities Many of these patients are subnormal mentally

Differential diagnosis The condition is characteristic

Therapy None effective

Alopecia Liminaris Frontalis

Synonym None

Sites of predilection The hair margin on the forehead and anterior to the ears

Objective symptoms The condition may begin on the forehead or anterior to the ears a a scant, scaling macular eruption which does not produce subjective symptoms. The eventual picture is a symmetric band-like area of baldness which extends from one pre-auricular area across the forehead at the hair margin to the other pre-auricular area. The baldness produced is usually permanent

Subjective symptoms None

Etiology The condition is more common in the Negro and is caused by excessive traction on the hair in forming braids. Excessive brushing with a very stiff brush may also cause this condition.

Histopathology There is follicular atrophy

Diagnostic aids Clinical appearance and history

Relation to systemic disease None

Differential diagnosis Seborrheic dermatitis scarring alopecias of other types.

Therapy Discontinue the practice of strenuous brushing and the formation of tight braids. Local therapy is of no value

Alopecia Male Pattern

Synonym. Alopecia prematura alopecia senilis pelade

Sites of predilection The scalp

Objective symptoms Male pattern baldness may begin prior to the twentieth year (alopecia prematura) or may not have its onset until after the third decade The hair recedes on either side in the parietal area and also on the crown. The condition may be manifested by slight thinning of the hair in these areas, or it may be progressive becoming an extensively bald area with only a fringe of hair remaining The skin of the bald area appears normal although varying degrees of seborrheic dermatitis may be present The scalp may be dry or oily In older individuals seborrheic keratoses are frequently found on the bald area

Subjective symptoms Usually none If seborrheic dermatitis is present there is mild itching

Etiology Unknown There may be a familial tendency toward baldness.

Histopathology Atrophy of hair follicles in the involved area

Diagnostic aids. History and clinical appearance

Relation to systemic disease. None. The degree of alopecia has no relationship to the state of the patient's health. Loss of hair does not mean a loss of virility or the presence of senescence.

Differential diagnosis. Clinical appearance is characteristic.

Therapy. None effective.

Alopecia, Symptomatic

Synonym. Essential alopecia of women.

Sites of predilection. Scalp.

Objective symptoms. Diffuse thinning of scalp hair in the absence of any gross inflammatory process. There are no circumscribed areas of alopecia. The hair is of normal texture. There is no excessive scale or oiliness.

Subjective symptoms. Emotional imbalance caused by hair loss.

Etiology. May be associated with factors such as emotional tension, excessive brushing, pregnancy, hormone imbalance, etc.

Histopathology. The microscopic picture is not diagnostic.

Diagnostic aids. History and physical examination; use scrapings and cultures to rule out fungus infections.

Relation to systemic disease. Hormone imbalance, emotional tension, pregnancy.

Differential diagnosis. Other types of alopecia.

Therapy. Avoid excessive brushing, washing, use of mechanical devices, and hair preparations. Treat the underlying disease.

Alopecia, Syphilitic

Synonym. None.

Sites of predilection. Scalp. This manifestation is concomitant with other lesions of secondary syphilis.

Objective symptoms. There are numerous discrete areas of incomplete alopecia over the entire scalp. The individual areas vary in size from 1 to [illegible] cm in diameter. The incomplete hair loss in these closely grouped lesions presents a characteristic "moth-eaten" appearance. Following administration of antisyphilitic treatment the hair regrows.

Subjective symptoms. None produced by the cutaneous lesions.

Etiology. *Spirochaeta pallida* (see the chapter on Venereal Diseases).

Histopathology. Discussed in the chapter on Venereal Diseases.

Diagnostic aids. Discussed in the chapter on Venereal Diseases.

Relation to systemic disease. Syphilis is a systemic disease.

Differential diagnosis. Alopecia areata, tinea capitis, febrile alopecia.

Therapy. Treatment of syphilis.

Alopecia Toxic

Synonym. Febrile alopecia.

Sites of predilection. The scalp.

Objective symptoms. This type of alopecia is associated with constitutional infections such as typhoid fever, influenza, pneumonia, scarlatina and drug reactions. Hyperpyrexia is usually associated. There is diffuse general hair loss, occasionally approaching complete baldness. The hair usually regrows after recovery from the primary condition.

Subjective symptoms. None produced by the cutaneous lesion.

Etiology. Although the hair loss is produced by some constitutional disease, the mechanism of action is unknown.

Histopathology. Nonspecific picture.

Diagnostic aids. History and physical examination.

Relation to systemic disease. The condition is associated with some generalized systemic illness usually accompanied by fever.

Differential diagnosis. Alopecia areata, alopecia prematura, syphilitic alopecia.

Therapy. Treatment of the underlying condition.

Canities

Synonym. Gray hair; poliosis.

Sites of predilection. Scalp.

Objective symptoms. The condition may be congenital (as in albinism), premature or senile. There is depigmentation of the hair to gray or white in circumscribed areas, or there is general

lized involvement Graying of the hair may develop prematurely in childhood at puberty or after the third decade The texture of the hair is unchanged Occasionally a circumscribed area of gray hair accompanies the development of vitiligo or leukoderma A single circumscribed lock of white hair may develop in early childhood or at puberty (poliosis circumscripta or localized canities)

Subjective symptoms None

Etiology Unknown

Histopathology Absence of pigment in the follicle and hair shaft

Diagnostic aids Clinical appearance is characteristic

Relation to systemic disease Premature graying of the hair may follow a prolonged systemic illness or emotional tension

Differential diagnosis Clinical appearance is characteristic

Therapy None

Cutis Verticis Gyrata

Synonym None

Sites of predilection Scalp

Objective symptoms The skin of the scalp is over abundant and thrown into folds resembling the convolutions of the brain The condition may be localized into one small area or it may involve the entire scalp There is usually thinning of the hair over the convolutions, which are arranged in an irregular sagittal manner

Subjective symptoms None produced by the cutaneous lesion

Etiology Some cases develop following severe infection others are nevoid in character Constitutional diseases may play some role in the production of the lesions.

Histopathology Nonspecific.

Diagnostic aids Clinical appearance and history

Relation to systemic disease The condition has been known to develop in association with acromegaly myxedema leukemia and granuloma fungoides

Differential diagnosis The clinical condition is characteristic

Therapy If a nevus or neurofibroma is causative of the condition plastic surgery *may be of value*

Dandruff

Synonym Seborrhea sicca pityriasis capitis mild seborrheic dermatitis.

Sites of predilection Scalp eyebrows and face

Objective symptoms. The condition does not usually develop until puberty After this it may appear at any age There are ill-defined, discrete and confluent small or large scattered areas in which there is moderate to marked scaliness. The scale is white or gray dry or oily The condition is usually limited within the hair line There is absence of inflammatory changes. *More extensive lesions, in which inflammation* develops, are characteristic of seborrheic dermatitis.

Subjective symptoms None or mild itching

Etiology Some scale formation is physiologic Excessively oily foods, emotional tension and medicated hair dressings may cause more active scaling

Histopathology Hyperkeratosis and parakeratosis with slight acanthosis

Diagnostic aids Use the Wood light and cultures to rule out fungus infections

Relation to systemic disease None usually

Differential diagnosis Ringworm of the scalp psoriasis pediculosis.

Therapy Eliminate oily and greasy foods Use *Selsun Fostex* Sebulex or Capsebon shampoo once weekly Seba Nil or resorcin-salicylic acid scalp lotion used once or twice daily may be of great value

Dermatitis of External Origin

Synonym Allergic contact dermatitis.

Sites of predilection Scalp and other areas.

Objective symptoms. In the scalp the lesions may be *macular* papular or vesicular Secondary pyogenic infection may complicate the previously existing eruption The lesion may be localized to the scalp or extend on to the forehead, face and neck Small or large area may be involved. In extensive cases the edema may spread to the forehead and the tissues about the eyes.

Subjective symptoms Moderate to intense itching.

Etiology Sensitization to hair tonics, spray net hair straighteners, hair wave solution sham

pose perfume, and many other agents applied to the hair or scalp.

Histopathology Edema of the epidermis and upper cutis Perivascular round cell infiltration in the upper cutis.

Diagnostic aids. History and physical examination patch tests to the suspected sensitizing substance

Relation to systemic disease None usually

Differential diagnosis. Seborrheic dermatitis; psoriasis, fungus infection.

Therapy Determination and removal of the causative factor If secondary pyogenic infection is present use warm boric acid or saline compresses, followed by the use of a steroid-antibiotic ointment. Burow's solution, 1 :32, used as cold wet dressings for one-half hour several times daily If secondary pyogenic infection is absent, the use of a plain steroid ointment or lotion will produce a satisfactory result.

Favus

Synonym Tinea favosa.

Sites of predilection Scalp trunk and nails.

Objective symptoms. In the scalp the lesion begins as pinkish macule which becomes scaly Scale formation increases until there are numerous areas of raised cup-shaped (*scutula*) yellowish or grayish, scaly lesions at the bases of tufts of hair Eventually diffuse or circumscribed areas of thick scale formation occur The scalp has a musty or "mousy" odor Removal of the scutula exposes an atrophic scarred area which is permanently bald.

The nail plates become distorted thickened, and friable Underlying the plates there is grayish or brownish, hyperkeratotic and caseous material Permanent distortion of the involved nail bed occurs

Subjective symptoms Mild to moderate itching.

Etiology *Trichophyton schoenleini* The condition is found among immigrants from Slavic countries There are foci in West Virginia and Kentucky There is also a focus in Canada

Histopathology Histopathologic changes depend on the clinical manifestation.

Diagnostic aids. Culture on Sabouraud medium. Examination of a direct preparation using 20 per cent potassium hydroxide or the ink potassium hydroxide stain.

Relation to systemic disease None.

Differential diagnosis Seborrheic dermatitis psoriasis tinea tonsurans impetigo contagiosa

Therapy X-ray epilation may stop the progress of the disease in the scalp Nail lesions are resistant to treatment Griseofulvin may be of value on systemic administration.

Folliculitis Decalvans

Synonym. Quinquaud s disease.

Sites of predilection. Scalp

Objective symptoms The condition begins with the development of small, reddish follicular papulopustules. A hair usually protrudes through each of the follicular lesions. As the pustules dry the crust and hair fall out leaving a thin atrophic scar In advanced cases there are few to numerous, round or irregular bald areas, in which the surface is a shiny pinkish or whitish scar without follicular orifices. Active follicular pustules are usually present in the margins of the bald areas. The alopecia produced by this process is permanent.

Subjective symptoms. Moderate to intense itching.

Etiology Staphylococci.

Histopathology Not diagnostic.

Diagnostic aids. Cultures must be made to rule out scarring fungus infections of the scalp Cultures on blood agar and disc or tube dilution sensitivity test should be done

Relation to systemic disease No specific relationship

Differential diagnosis. Favus lupus erythematosus; alopecia areata *Trichophyton tonsurans* or *Trichophyton violaceum* infection.

Therapy Treatment of the pyogenic infection systemic antibiotic therapy may be of value

Fragilitas Crinium

Synonym. None.

Sites of predilection Scalp

Objective symptoms. The hair is lustreless and greatly diminished in quantity There is splitting or fragility of the hair shaft The hair splits at the distal end of the shaft

Subjective symptoms The hair feels dry and lustre-

less to the patient and there may be delusions of parasitosis

Etiology Endocrine dysfunction dietary deficiency and trauma caused by excessive washing and brushing are all contributing factors.

Histopathology The hair is split at the distal end

Diagnostic aids Microscopic examination of the hair history and physical examination of the patient basal metabolic rate and protein-bound iodine tests should be done

Relation to systemic disease Endocrine dysfunction and dietary deficiencies are associated systemic illnesses.

Differential diagnosis Emotional tension other atrophic hair disturbances.

Therapy Avoid strenuous brushing and washing Use of a hair dressing containing oil or lanolin Keep the hair relatively short

Hypertrichosis

Synonym Excessive hair superfluous hair

Sites of predilection Face trunk and extremities of women

Objective symptoms There is an excessive growth of hair usually occurring on the face This may consist of a profuse growth of fine down Occasionally the condition is limited to the mustache area Coarse dark hair may be intermingled with the fine downy growth In some women there is a scattered growth of coarse black hairs over the chin and upper lip If the condition is extensive it may involve the areolae of the nipples and the extremities If an endocrine disturbance is responsible the hair growth on the abdomen may assume the male pattern

The condition may be present at birth but most commonly develops after puberty and becomes extensive with the passage of time In many women the condition begins at the time of the menopause

Subjective symptoms Cutaneous lesions produce no subjective symptoms The cosmetic defect may be causative of severe mental illness.

Etiology The condition may be familial idiopathic or caused by some endocrine imbalance

Histopathology Not a specific picture

Diagnostic aids History and physical examination 17 ketosteroids blood sugar basal metabolic rate protein bound iodine tests

Relation to systemic disease Ovarian abnormalities acromegaly Cushing's disease adrenocortical hypoplasia caused by the administration of cortisone or its derivatives

Therapy The use of depilatories may be of value Mechanical removal of the hair by electrolysis or high frequency current is also effective X ray epilation is not to be used

Ingrown Hair

Synonym Pili incarnati

Sites of predilection Bearded portion of the face particularly the neck.

Objective symptoms The hair in the affected portion grows obliquely and does not penetrate the stratum corneum but extends beneath it causing papules and pustules to develop On close inspection using a hand lens, the examiner will see the hair growing transversely just beneath the stratum corneum When the skin surface is broken the hair may be lifted out Following extraction of the buried hair the papules heal with scar formation

Subjective symptoms. Itching

Etiology An inherent defect in hair follicle direction becoming apparent in adolescence or early adult life when shaving becomes a necessity

Histopathology The follicles in the involved area are distorted and in some instances form an acute angle with the skin surface

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Folliculitis sycosis vulgaris.

Therapy Manual epilation of the hairs in the involved areas Permanent removal of the hair by the use of electrolysis or high frequency current is frequently of value X ray therapy is of no value

Keratosis Seborrheic

Synonym Senile warts

Sites of predilection Scalp face and back

Objective symptoms This benign superficial epidermal tumor usually affects persons beyond the age of 35 The lesions develop as well

defined, flat-topped, grayish, brownish or blackish papules or tumors, which vary in size from 5 mm. to 2 to 3 cm in diameter. The lesions are round or oval in shape, usually sessile but occasionally pedunculated, and are covered with an oily film. They are few to numerous and may persist indefinitely without change.

Subjective symptoms. None or slight itching.

Etiology. Unknown.

Histopathology. The acanthotic epidermis is papillomatous. The papillae of the cutis are elongated.

Diagnostic aids. Biopsy.

Relation to systemic disease. None usually.

Differential diagnosis. Melanoma, senile keratosis, epitheliomas.

Therapy. Removal of the lesion by light desiccation under procaine anesthesia.

Lepothrix

Synonym. Trichomycosis axillaris.

Sites of predilection. Axillae.

Objective symptoms. There are yellow, red or black concretions on the hair shafts. The individual lesions resemble the ova of pediculosis.

Subjective symptoms. None.

Etiology. Various organisms have been considered as causative agents but there is no specific proof.

Histopathology. The concretions on the hair shafts are formed of masses of microorganisms in a homogeneous waxy substance resembling chitin.

Diagnostic aid. Microscopic examination of the involved hair.

Relation to systemic disease. None.

Differential diagnosis. Pediculosis, fungus infections.

Therapy. Shave the axillae and cleanse the skin with mild antiseptics.

Lupus Erythematosus

Synonym. None.

Sites of predilection. Scalp, face and other areas. Read the description of lupus erythematosus in the chapter on Macular Eruptions.

Objective symptoms. The scalp lesions consist of one or more round or irregular discrete or confluent depressed, atrophic scarred areas which are devoid of hair. Follicular plugging may be observed at the margin of the lesion. The edges of the scarred area are usually pink and the central portion white. The baldness is permanent. There are usually other lesions of lupus erythematosus associated with the scalp lesions.

Subjective symptoms. Itching or burning.

Etiology. Unknown.

Histopathology. See the discussion on lupus erythematosus in the chapter on Macular Eruptions.

Diagnostic aids. See the discussion on lupus erythematosus in the chapter on Macular Eruptions.

Relation to systemic disease. Lupus erythematosus is a systemic disease.

Differential diagnosis. Favus, folliculitis decalvans, alopecia areata, pseudopelade.

Therapy. See the description of lupus erythematosus in the chapter on Macular Eruptions.

Pediculosis Capitis

Synonym. Head lice, bugs.

Sites of predilection. Scalp.

Objective symptoms. There are few to numerous, minute, pearly ovoid bodies which adhere to the hair shafts by a layer of chitin. Live pediculi may be present. Excoriations or pyogenic infection in the scalp, on the forehead and the back of the neck are physical signs which may be indicative of pediculosis. The ova (nits) glow with grayish fluorescence when exposed to the Wood light.

Subjective symptoms. Intense itching.

Etiology. *Pediculus capitis.*

Histopathology. Microscopic examination of a hair shaft containing an ovum reveals the parasite within the ovum. The Wood light is an excellent method for finding ova.

Relation to systemic disease. None usually.

Differential diagnosis. Seborrhea sicca, psoriasis.

Therapy. Dust the hair thoroughly with 5 per cent DDT powder to kill the live parasites. Wrap the head in a towel overnight. This same procedure should be repeated in 3 days. DDT will kill the live parasites but will not attack the ova (nits). In order to remove the nits,

less to the patient and there may be delusions of parasitosis.

Etiology Endocrine dysfunction dietary deficiency and trauma caused by excessive washing and brushing are all contributing factors.

Histopathology The hair is split at the distal end.

Diagnostic aids Microscopic examination of the hair history and physical examination of the patient basal metabolic rate and protein bound iodine tests should be done

Relation to systemic disease Endocrine dysfunction and dietary deficiencies are associated systemic illnesses.

Differential diagnosis Emotional tension other atrophic hair disturbances

Therapy Avoid strenuous brushing and washing Use of a hair dressing containing oil or lanolin Keep the hair relatively short

Hypertrichosis

Synonym Excessive hair superfluous hair

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Objective symptoms There is an excessive growth of hair usually occurring on the face This may consist of a profuse growth of fine down Occasionally the condition is limited to the mustache area Coarse dark hair may be intermingled with the fine downy growth In some women *there is a scattered growth of coarse* black hairs over the chin and upper lip If the condition is extensive it may involve the areolae of the nipples and the extremities If an endocrine disturbance is responsible the hair growth on the abdomen may assume the male pattern

The condition may be present at birth but most commonly develops after puberty and becomes extensive with the passage of time In many women the condition begins at the time of the menopause

Subjective symptoms Cutaneous lesions produce no subjective symptoms The cosmetic defect may be causative of severe mental illness

Etiology The condition may be familial idiopathic or caused by some endocrine imbalance

Histopathology Not a specific picture

Diagnostic aids History and physical examination 17 ketosteroids blood sugar basal metabolic rate protein bound iodine tests

Relation to systemic disease Ovarian abnormalities acromegaly Cushing's disease adrenocortical hypoplasia caused by the administration of cortisone or its derivatives.

Therapy The use of depilatories may be of value Mechanical removal of the hair by electrolysis or high frequency current is also effective X ray epilation is not to be used

Ingrown Hair

Synonym Pili incarnati

Sites of predilection Bearded portion of the face particularly the neck

Objective symptoms The hair in the affected portion grows obliquely and does not penetrate the stratum corneum but extends beneath it causing papules and pustules to develop On close inspection using a hand lens, the examiner will see the hair growing transversely just beneath the stratum corneum When the skin surface is broken the hair may be lifted out Following extraction of the buried hair the papules heal with scar formation

Subjective symptoms Itching

Etiology An inherent defect in hair follicle direction becoming apparent in adolescence or early adult life when shaving becomes a necessity

Histopathology The follicles in the involved area are distorted and in some instances form an acute angle with the skin surface

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis. Folliculitis sycosis vulgaris

Therapy Manual epilation of the hairs in the involved areas Permanent removal of the hair by the use of electrolysis or high frequency current is frequently of value X-ray therapy is of no value

Keratosis Seborrheic

Synonym Senile warts

Sites of predilection Scalp face and back

Objective symptoms This benign superficial epidermal tumor usually affects persons beyond the age of 40 The lesions develop as well

Subjective symptoms. None, or slight itching.

Etiology. Unknown.

Histopathology. Atrophy of the epidermis and its appendages.

Diagnostic aids. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. Folliculitis decalvans, favus, lupus erythematosus, alopecia areata.

Therapy. None effective.

Psoriasis

Synonym. None.

Sites of predilection. Scalp, elbows, knees, and trunk.

Objective symptoms. In the scalp it is frequently difficult to differentiate seborrheic dermatitis from psoriasis, unless there are characteristic lesions on the trunk and extremities.

There are few to numerous, discrete and confluent, sharply defined macular lesions, which are covered with profuse silvery or grayish scales. It is difficult to demonstrate bleeding points on the scalp. Annular lesions may be present (see psoriasis in the chapter on Papular Eruptions).

Subjective symptoms. Mild to moderate itching.

Etiology. Unknown.

Histopathology. There is acanthosis with extension of the rete pegs and dilatation of vessels in the tips of the papillae. Munro abscesses occur in the stratum corneum.

Diagnostic aid. Biopsy.

Relation to systemic disease. None.

Differential diagnosis. Seborrheic dermatitis, favus, fungus infections of the scalp.

Therapy. See psoriasis in the section on Papular Eruptions.

Pyoderma

Synonym. Impetigo contagiosa, coccogenous dermatitis, Bockhart impetigo.

Sites of predilection. Scalp.

Objective symptoms. The condition begins as a primary pyogenic infection. The initial lesion is a small vesicle or pustule which may surround a hair or occur on the scalp between hair follicles. These vesicles or pustules break down and form grayish or yellowish, thick, superficial crusts which are held in place by the hair. When the crusts are removed, pus exudes. The eruption may be localized to one or more small areas or it may become quite extensive. Healing is not followed by scar formation or alopecia.

Pyogenic infection may complicate seborrheic dermatitis of the scalp, psoriasis, pediculosis and contact dermatitis. If the pyoderma is secondary to some other eruption, evidence of the primary disease is usually found.

Subjective symptoms. Moderate to intense itching.

Etiology. In primary pyogenic infections staphylococci and streptococci are found. The condition may develop as a complication of pediculosis capitis, seborrheic dermatitis, contact dermatitis, or psoriasis. Atopic dermatitis may also be complicated by secondary pyogenic infection.

Histopathology. There is crust formation caused by pyogenic infection of the epidermis and the upper cutis.

Diagnostic aids. History and physical examination. Wood light examination for fungus infection, cultures on blood agar to determine the specific organism.

Therapy. Use warm saline or boric acid compresses to remove the crusts and follow this with applications of a suitable antibiotic ointment.

Seborrhea Oleosa

Synonym. Oily skin.

Sites of predilection. Scalp and face.

Objective symptoms. The face and scalp are exceptionally oily, causing the surface to have a shiny appearance. The sebum production in the scalp may be so profuse as to necessitate washing the hair 2 to 3 times weekly.

Subjective symptoms. Usually none.

Etiology. Excessive endocrine activity.

Histopathology. Dilated sebaceous glands.

Diagnostic aids. Clinical appearance is characteristic; biopsy.

Relation to systemic disease. None.

Differential diagnosis. The condition is characteristic.

Therapy. Frequent cleansing of the face with a bland soap, Fostex soap or acne-aid detergent and frequent washing of the scalp with a bland shampoo.

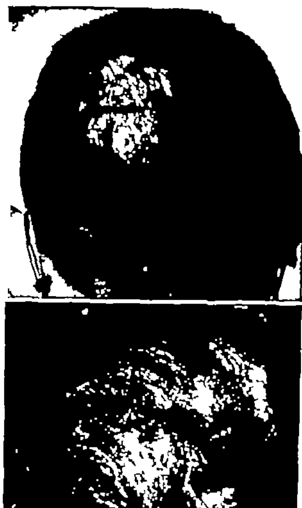


FIG 102 Above Pediculosis capitis complicated by pyoderma Numerous ova present on hair shafts Below Numerous ova present on hair shaft

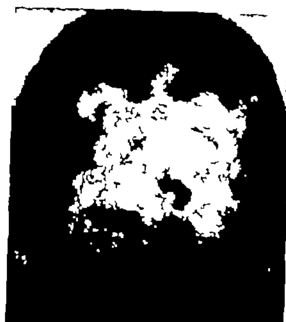


FIG 103 Perifolliculitis abscedens et suffodiens

soak the hair in 5 per cent acetic acid or white vinegar Wrap the head in a towel dampened with this solution for several hours. This will soften the chitin (cement substance) which binds the nit to the hair Comb the hair with a fine-tooth comb and follow this with a thorough shampoo A 25 per cent emulsion of benzyl benzoate also kills nits.

Perifolliculitis Abscedens et Suffodiens

Synonym Perifolliculitis of the scalp with scarring alopecia

Sites of predilection Scalp

Objective symptoms The condition begins as follicular pustules, which develop into multiple abscesses in the scalp The lesions become deep seated and confluent by burrowing into each other As the older lesions heal new lesions develop The healing lesions leave irregular permanently bald scars. Occasionally these patients have associated hidradenitis suppurativa in the axillae and groins.

Subjective symptoms Pain in the involved areas.

Etiology Probably an acneform process Pyogenic bacteria are contributing factors.

Histopathology Scar formation in the areas of alopecia with obliteration of hair follicles. The histopathologic picture in the active nodules is a granulomatous process suggestive of tuberculosis

Diagnostic aids Culture of the exudate disc and tube dilution sensitivity tests for antibiotic selection general physical examination

Relation to systemic disease No specific relationship

Differential diagnosis Furuncles folliculitis decalvans

Therapy Systemic administration of the selected antibiotic Radiation therapy may be of value

Pseudopelade

Synonym Cicatricial alopecia

Sites of predilection Scalp

Objective symptoms One or more discrete or confluent areas of baldness with atrophic scarring The surface may be pinkish or whitish There is absence of folliculitis



F 104 Tinea barbae Majocchi's granuloma A granulomatous folliculitis and perifolliculitis caused by *Trichophyton rubrum*

material are discharged through dilated follicular orifices in the lesions. A single large boggy granulomatous crusted lesion, resembling kerion may develop (Majocchi's granuloma)

Subjective symptoms Intense itching.

Etiology *Microsporum canis* *Microsporum fulvum* *Trichophyton gypseum*, and *Trichophyton crateriform* An occasional case is caused by *Trichophyton rubrum*

Histopathology There is invasion of the hair shaft within the follicle by the offending fungus. There is also folliculitis and perifolliculitis and an infiltrate of polymorphonuclear leukocytes

Diagnostic aids. History and physical examination Use of the ink-potassium hydroxide stain and cultures on Sabouraud medium to identify the offending organism biopsy

Relation to systemic disease None

Differential diagnosis Sycosis vulgaris folliculitis

Therapy There is a tendency toward spontaneous involution of lesion Warm boric acid compresses to remove the surface detritus, followed by spectrocin ointment terramycin ointment or one of the other antibiotic topical preparations to control the pyogenic infection

Tinea Capitis

Synonym Ringworm of the scalp tinea tonsurans

Sites of predilection Scalp neck, and face

Objective symptoms The lesions begin in the scalp as one or more small pinkish scaly macules which spread peripherally Because of invasion of the hair cortex by the fungus the hairs become weak and break off close to the scalp leaving well defined areas of partial alopecia. The mature lesion is well defined, round, discrete or confluent, and covered with an adherent grayish scale The broken-off hairs in the involved area are lustreless

Secondary pyogenic infection may develop producing raised boggy tender lesions, which are covered with pustules and pus crust This complication, known as *kerion* may vary in size from 2 to 10 cm. in diameter

Lesions composed of concentric rings and an-





F 105 Tinea capitis (*Below*) With secondary infection (Kerion)

Seborrheic Dermatitis

Synonym None

Sites of predilection Scalp, face, presternal region, interscapular area, pubic area (see seborrheic dermatitis in the chapter on Macular Eruptions)

Objective symptoms The condition usually begins in the scalp with variously sized, discrete and confluent, round or irregular macules which are well defined and covered with a moderate or profuse whitish or yellowish oily scale. There is festoon formation by extension of the lesion beyond the hairline onto the forehead. Annular lesions are present.

Subjective symptoms Moderate to intense itching.

Etiology Unknown. The condition is frequently associated with tension factors.

Histopathology Slight hyperkeratosis and parakeratosis. Moderate acanthosis. There is some cellular and perivascular round cell infiltration in the upper cutis. The picture is not diagnostic.

Diagnostic aids Use of the Wood light; culture on Sabouraud's medium to exclude fungus infections.

Relation to systemic disease None usually.

Differential diagnosis It is frequently difficult to differentiate seborrheic dermatitis from psoriasis when the lesions occur only in the scalp. The confusion which exists between these two conditions has caused the development of the term *seborrhiasis*.

Therapy Selsun, Sebulex, Capsebon and Fostex may be of value. Sulfur and salicylic acid (2.5 per cent) ointment is usually effectual. Resorcin-salicylic scalp lotion and Sebo-Nil are also effective. Low fat diet may be indicated.

Sycosis Vulgaris

Synonym Barber's itch

Sites of predilection Bearded portion of the face

Objective symptoms The primary lesion is a deep-seated follicular papule or pustule pierced by a hair. In the older pustular lesions the hairs become loosened in the follicle and may be easily extracted. The condition is chronic and recurrent. Some papules and pustules undergo involution but new lesions constantly develop. Scar formation may develop and become extensive.

The onset of the condition may be preceded by a contact dermatitis. In chronic cases there is frequently associated blepharitis and folliculitis.

Subjective symptoms Itching

Etiology Staphylococci may be inoculated by poor shaving hygiene, or secondary pyogenic infection may complicate allergic contact dermatitis.

Histopathology There is a primary follicular infection and perifollicular involvement as well. The inflammatory infiltrate consists of round cell and polymorphonuclear leukocytes.

Diagnostic aids Biopsy; culture on blood agar, disc and tube dilution sensitivity tests for antibiotic selection. Culture should be made on Sabouraud's medium to rule out fungus infections.

Relation to systemic disease None usually.

Differential diagnosis Tinea sycosis.

Therapy Correct shaving hygiene. Avoid the use of perfumed after-shave lotions and shaving creams containing sensitizing antiseptics. Wash the face thoroughly before and after shaving. Wash and dry the razor before storing. Immediately after shaving compress the face with warm boric acid solution and follow with an application of spectrocin ointment, terramycin ointment, or some other suitable antibiotic preparation. In resistant cases, systemic antibiotic therapy may be necessary. X-ray treatment may be of value in chronic cases.

Tinea Barbae

Synonym Tinea sycosis; barber's itch

Sites of predilection Bearded portion of the face

Objective symptoms A superficial lesion, similar to ringworm infection on other parts of the body, develops as a discrete, round, pinkish, occasionally annular scaly macule. The lesion may develop as concentric rings. The hair follicles are involved and the infected hairs, which become dry and brittle, are easily extracted.

The deep type of tinea barbae develops on the skin beneath the lower lip, on the upper lip, on the jaw, or on the neck just below the jaw. The condition may begin as the superficial type and eventually develop deep-seated papules and pustules. The lesions are round or oval, bright red, and covered with broken-off hairs. The nodules may ulcerate. Pus and seropurulent

Etiology. Unknown.

Histopathology. Examination of the nodes reveals longitudinal splitting of the hair shaft producing a formation which resembles two small paint brushes pushed together end to end.

Diagnostic aids. Microscopic examination of the hair.

Relation to systemic disease. None usually.

Differential diagnosis. Other idiopathic atrophy of the hair.

Therapy. None.

Trichotillomania

Synonym. None.

Sites of predilection. Scalp.

Objective symptoms. This type of baldness is self inflicted. The patient forcibly extracts or twists the hair. There are one or more, small or large irregular areas of baldness without evidence of any active inflammatory process. The remaining hair in these areas of incomplete baldness varies in length from 1 mm. to 1 cm. in length.

Subjective symptoms. Those produced by the mental aberrations of the patient.

Etiology. Mental illness or emotional instability.

Histopathology. Not a specific picture.

Diagnostic aids. History, physical examination, psychoanalysis.

Relation to systemic disease. Mental illness, emotional instability.

Differential diagnosis. Alopecia areata, alopecia prematura, tinea capitis.

Therapy. Psychotherapy.

nular lesions may appear on the scalp face or neck

Subjective symptoms The dry scaly lesions may cause mild itching The lesions of kerion cause severe pain

Etiology This contagious disease is most commonly caused by *Microsporum audouini* (human type) or *Microsporum canis* (animal type) *M canis* infects cats, dogs, and monkeys and is transmitted to humans. *Trichophyton tonsurans* and *Trichophyton violaceum* also cause ringworm of the scalp

Histopathology The ectothrix organisms (*M audouini* and *M canis*) as well as the other organisms begin invasion of the hair root within the follicle The cortex of the hair is weakened by the invasion On examination of a wet preparation using potassium hydroxide or the ink potassium hydroxide stain hyphae and spores may be found throughout the hair

Diagnostic aids The Wood light is valuable in the diagnosis of tinea capitis caused by *M audouini* and *M canis* The hair in the affected area glows with a bluish-green fluorescence when exposed to this light The Wood light is of no value in tinea capitis caused by other organisms.

Direct examination of hair using 20 per cent potassium hydroxide or the ink-potassium hydroxide stain will establish the fungus origin of the disease in a few minutes.

Culture on Sabouraud s medium is essential to identify the specific offending organism

Relation to systemic disease None

Differential diagnosis Seborrheic dermatitis psoriasis

Therapy In order to comply with health department regulations, the child s hair should be shaved or closely clipped The child should wear a washable cap at all times

There is no satisfactory commercially available topical fungicide for the treatment of these patients Ammoniated mercury ointment (5 per cent) Salundek and 5 per cent sulfur-salicylic acid ointment may be used

X ray epilation of the scalp for tinea capiti which has become obsolete with the introduction of Griseofulvin must be performed by someone who is qualified to do this type of work

Griseofulvin an antifungal antibiotic administered systemically cures tinea capitis.

Trichorrhexis Nodosa

Synonym None

Sites of predilection Scalp

Objective symptoms There is diminution of hair in the involved area The lesion may be circumscribed or universal The condition most commonly occurs in the scalp but may involve the ears the axillae or the pubic area. There is longitudinal splitting of the hair shaft at intervals producing the minute grayish nodes observed on gross examination Several nodes may develop on a single hair Hairs fracture easily on slight trauma

Subjective symptoms None

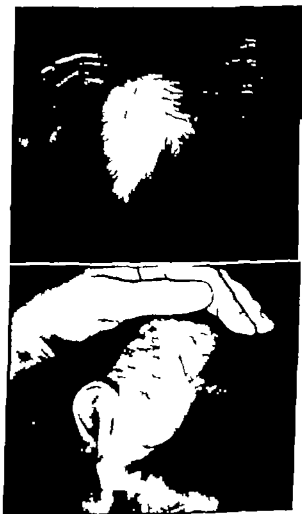


Fig 100 Trichotillomania

Histopathology Hyperkeratosis and acanthosis. There is vascular dilatation of the papillary portion of the cutis and a perivascular round and plasma cell infiltrate

Diagnostic aids. History and physical examination patch tests search for foci of infection

Relation to systemic disease The condition may indicate atopic dermatitis.

Differential diagnosis Erythema multiforme bul losum.

Therapy Search for and remove the causative factor Topical steroid therapy is frequently of value Radiation with Grenz rays may be beneficial. Conventional x ray therapy should be avoided.

Cheilitis Glandularis

Synonym. None

Sites of predilection Lips

Objective symptom There is swelling of the lips caused by enlargement of the mucous gland Over the mucous surfaces of the lips there are widely dilated openings of the mucou glands and constant exudation of mucus Mucous glands are readily palpable and feel like small pebbles. When pressure is applied mucus exudes through the openings. There may be associated enlargement of the mucous glands of the buccal and pharyngeal mucosa

Subjective symptoms. Patients complain of a "stleky" feeling about the lips.

Etiology Unknown

Histopathology Enlargement of the mucous glands nd widely dilated mucou gland duct

Diagnostic aids. History and physical examination biopsy

Relation to systemic disease None usually

Differential diagnosis Clinical appearance is characteristic

Therapy None effect e

C t (Retention) of th Mucous M mbrane

Synonym None

Sites of predilection. Lips tongue and buccal mucosa.

Object symptoms The lesions re usually single non-tender raised, non-inflamed, fluctuant cysts. They are shiny and covered with normal mucous membrane They vary in size from 3 to 5 mm in diameter and contain a clear thick fluid.



F 107 Mucus retention y t

Subjective symptoms None

Etiology Caused by closure of the mucous gland duct by trauma Lip biting may be a causative factor

Histopathology A dilated mucous cyst.

Diagnostic aids. Biopsy

Relation to systemic disease None

Differential diagnosis Tumor of any type which may occur on the lips.

Therapy Destruction of the cyst by electro-desiccation.

Fordyce s Disease

Synonym None

Sites of predilection Lips and buccal mucosa labia minora penis, and areolae of the nipples.

Objective symptoms. There are few to numerous discrete grouped or confluent whitish or yellowish, noninflammatory flat lesions The condition may be exten ive

Subjective symptoms. None.

Etiology Unknown.

Histopathology The lesions are anomalous sebaceous glands.

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Leukoplakia lichen planus.

Chapter 20

LESIONS INVOLVING THE MUCOUS MEMBRANES

Burning Tongue

Synonym Glossodynia

Sites of predilection Tongue

Objective symptoms There are no visible objective lesions

Subjective symptoms This condition which commonly occurs in men and women beyond middle age produces severe burning pain The subjective symptoms may be limited to the front half the tongue and occasionally are unilateral

Etiology Unknown Emotional tension or some underlying systemic disease may be the causative factor

Histopathology No change noted

Diagnostic aids History and physical examination adequate laboratory studies to rule out systemic disease

Relation to systemic disease Pernicious anemia hypochromic anemia and avitaminoses may give rise to this symptom Psychoneuroses are frequently the causative factor

Differential diagnosis There is no visible abnormality

Therapy Usually unsuccessful Search for and remove the underlying cause Treat the systemic disease present

Cheilitis Actinic

Synonym Cheilitis caused by sun exposure

Sites of predilection Vermilion surfaces of the lips

Objective symptoms There is edema of the lips and the vermilion border presents a dry crusted and scaly appearance with radial fissures In sailors farmers and other individuals who are constantly exposed to sunlight the vermilion surface becomes pale excessively dry and covered with an adherent scale Keratoses frequently develop

Subjective symptoms Discomfort because of the excessive dryness

Etiology Constant exposure to sunlight without adequate protection

Histopathology Hyperkeratosis with atrophy of the epidermis and senile elastosis in the cutis

Diagnostic aids Biopsy history and physical examination

Relation to systemic disease None usually

Differential diagnosis Cheilitis exfoliativa chronic contact dermatitis.

Therapy Adequate protection from constant exposure to sunlight Use of sun screen cream Removal of keratoses when they develop

Cheilitis Exfoliative

Synonym Exfoliative dermatitis of the lips cheilitis exfoliativa

Sites of predilection The vermilion border of the lips is exceptionally dry and covered with a slightly thickened chronically inflamed scaling mucous membrane Radial fissures are frequently present

Subjective symptoms Pain Discomfort is especially marked when liquids or foods are passed over the lips into the mouth

Etiology Unknown The condition may be associated with atopic eczema or may be evidence of chronic contact sensitivity

acute course. The lesions ultimately disappear and leave no trace. The condition is recurrent.

Subjective symptoms. None or slight discomfort

Etiology Unknown. May be associated with tension factors.

Histopathology Acanthosis and parakeratosis, with edema of the rete There is perivascular round-cell infiltration and a slight chronic inflammatory infiltrate in the upper cutis.

Diagnostic aids The clinical appearance is diagnostic.

Relation to systemic disease None

Differential diagnosis. Leukoplakia secondary syphilis erythema multiforme

Therapy Preserve good dental hygiene Grenz ray therapy may be of value.

Leukoplakia

Synonym. None

Sites of predilection Tongue buccal mucosa, and genital area.

Objective symptoms The lesions are sharply defined, round, oval or irregular slightly raised, white or grayish, slow growing, hyperkeratotic areas. The surface may not be removed by scraping. The lesions are irregular hyperkeratotic and noninflammatory Fissures may dedevelop. These lesions are frequently precancerous.

Subjective symptoms Some discomfort because of the presence of the hyperkeratotic lesion. Other symptoms may develop depending on the extent of the lesion

Etiology The oral lesions may be postinflammatory due to poor dental hygiene or associated with excessive smoking Genital lesion of leukoplakia may develop in association with lichen sclerosus et atrophicus (kraurosis vulvae)

Histopathology Hyperkeratosis and acanthosis with the formation of dyskeratotic cell

Diagnostic aids. Biopsy

Relation to systemic disease The lesions are frequently precancerous

Differential diagnosis Lichen planus lupus erythematosus syphilis

Therapy Remove the irritating cause Discontinue smoking The lesion may be removed by excision desiccation, or radiation therapy

Lichen Planus

Synonym. None.

Sites of predilection Buccal mucosa, flexor surfaces of the forearm male genitalia and lower extremities. The lesions may occur only in the mouth.

Objective symptoms Well defined, reticulated white lines, plaques or slightly elevated, smooth, whitish papules. Single white lines may appear on the buccal mucous membrane These lesions may be the only objective sign of lichen planus or there may be associated lesions elsewhere (see the description of lichen planus in the chapter on Papular Eruptions)

Subjective symptoms None

Etiology Unknown. Related to emotional tension or shock.

Histopathology There is a well defined round cell infiltrate in the papillary portion of the cutis. There is regular acanthosis and hyperkeratosis

Diagnostic aids. Biopsy

Relation to systemic disease Associated with emotional tension or shock.

Differential diagnosis. Leukoplakia syphilis lupus erythematosus.

Therapy Applications of 95 per cent phenol to the lesions may be of value Bistrimate tablets by mouth or intramuscular injection of bismuth subsalicylate may be of value

Lingua Nigra

Synonym Black hairy tongue

Site of predilection Tongue.

Objective symptoms The lesion which usually appears in the midline of the tongue and may involve the entire central portion is dark brown, black or dark gray It is composed of hair like projections which are actually prolongations of the papillae The condition may develop quickly or slowly and is of variable duration

Subjective symptoms. Usually none although the patient may complain of a bad taste in the mouth.

Etiology Unknown. Aureomycin Terramycin and penicillin troches have been responsible for the production of these lesions in many patients. Although the development of these lesions has

Therapy No treatment is necessary for this benign condition. Patients should be reassured.

Fusospirillosis

Synonym Trench mouth, Vincent's angina, fusospirochetosis.

Sites of predilection Gums, buccal mucosa, pharynx, lips and tongue. Lesions may also appear on the genitalia.



Fig 108 Fusospirillosis lips and vulva

Objective symptoms There are few to numerous, irregular superficial or deep ulcers which vary in size from a few millimeters to 3 or 4 cm. in diameter. The lesions are covered with an adherent whitish or greenish membrane. Gums are swollen and bleed on slight trauma. In advanced cases the teeth may be loosened. The breath has a fetid odor. The lymph nodes in the anterior triangles are swollen and tender. There is profuse salivation. Lesions on the genitalia appear as few to numerous, small to large superficial irregular ulcers which are covered with a greenish or grayish adherent membrane. The lesions are painful and when the membrane is detached free bleeding occurs.

Subjective symptoms Pain.

Etiology *Spirochaeta vincenti* and fusiform bacilli. This is a contagious disease. Pellagra and other debilitating diseases are predisposing factors in the development of fusospirillosis.

Histopathology There is edema of the superficial layers of the mucous membranes and evidence of an acute inflammatory process.

Diagnostic aids Dark field examination of the exudate from the ulcers.

Relation to systemic disease Pulmonary infection may occur.

Differential diagnosis Diphtheria, syphilis, bacterial infections.

Therapy Topically applied aqueous or glycerine solutions of neoarsphenamine may be of value. Systemically administered penicillin is very effective. Locally, hygienic measures are important.

Geographic Tongue

Synonym Transitory benign migrating plaques.

Sites of predilection Tongue.

Objective symptoms The condition begins as one or more small, sharply defined, grayish or yellowish, arcuate areas which spread peripherally producing asymptomatic superficial bizarre geographical figures which are reddish in color and may or may not have slightly raised grayish or yellowish borders. The papillae are flattened. Concentric rings may be formed, or two or more patches may become confluent, producing polycyclic figures. The condition has an



Fig 109 Geographic tongue

acute course. The lesions ultimately disappear and leave no trace. The condition is recurrent.

Subjective symptoms. None or slight discomfort.

Etiology. Unknown. May be associated with tension factors.

Histopathology. Acanthosis and parakeratosis with edema of the rete. There is perivascular round-cell infiltration and a slight chronic inflammatory infiltrate in the upper cutis.

Diagnostic aids. The clinical appearance is diagnostic.

Relation to systemic disease. None.

Differential diagnosis. Leukoplakia, secondary syphilis, erythema multiforme.

Therapy. Preserve good dental hygiene. Grenz ray therapy may be of value.

Leukoplakia

Synonym. None.

Sites of predilection. Tongue, buccal mucosa and genital area.

Objective symptoms. The lesions are sharply defined, round, oval or irregular, slightly raised, white or grayish, slow growing, hyperkeratotic area. The surface may not be removed by scraping. The lesions are irregular hyperkeratotic and noninflammatory. Fissures may develop. These lesions are frequently precancerous.

Subjective symptoms. Some discomfort because of the presence of the hyperkeratotic lesion. Other symptoms may develop depending on the extent of the lesion.

Etiology. The oral lesions may be postinflammatory due to poor dental hygiene or associated with excessive smoking. Genital lesions of leukoplakia may develop in association with lichen sclerosus et atrophicus (kraurosis vulvae).

Histopathology. Hyperkeratosis and acanthosis with the formation of dyskeratotic cell.

Diagnostic aids. Biopsy.

Relation to systemic disease. The lesions are frequently precancerous.

Differential diagnosis. Lichen planus, lupus erythematosus, syphilis.

Therapy. Remove the irritating cause. Discontinue smoking. The lesion may be removed by excision, desiccation or radiation therapy.

Lichen Planus

Synonym. None.

Sites of predilection. Buccal mucosa, flexor surfaces of the forearm, male genitalia and lower extremities. The lesions may occur only in the mouth.

Objective symptoms. Well defined, reticulated white lines, plaques or slightly elevated smooth whitish papules. Single white lines may appear on the buccal mucous membrane. These lesions may be the only objective sign of lichen planus or there may be associated lesions elsewhere (see the description of lichen planus in the chapter on Papular Eruptions.)

Subjective symptoms. None.

Etiology. Unknown. Related to emotional tension or shock.

Histopathology. There is a well defined round cell infiltrate in the papillary portion of the cutis. There is regular acanthosis and hyperkeratosis.

Diagnostic aids. Biopsy.

Relation to systemic disease. Associated with emotional tension or shock.

Differential diagnosis. Leukoplakia, syphilis, lupus erythematosus.

Therapy. Applications of 0.5 per cent phenol to the lesions may be of value. Bistrimate tablets by mouth or intramuscular injections of bismuth subsalicylate may be of value.

Lingua Nigra

Synonym. Black hairy tongue.

Sites of predilection. Tongue.

Objective symptoms. The lesion, which usually appears in the midline of the tongue and may involve the entire central portion, is dark brown, black or dark gray. It is composed of hair-like projections which are actually prolongations of the papillae. The condition may develop quickly or slowly and is of variable duration.

Subjective symptoms. Usually none although the patient may complain of a bad taste in the mouth.

Etiology. Unknown. Aureomycin, Terramycin and penicillin troches have been responsible for the production of these lesions in many patients. Although the development of these lesions has



FIG 110 Lingua n gra

been attributed to pathogenic yeasts or other fungi no specific organism has been consistently identified

Histopathology The papillae are hyperkeratotic and hypertrophied

Diagnostic aids History and physical examination cultures on Sabouraud s medium biopsy

Relation to systemic disease None

Differential diagnosis Condition is characteristic in appearance

Therapy Reassure the patient that it is not a serious systemic disease good dental hygiene mouth washes

Lupus Erythematosus

Synonym None

Sites of predilection Buccal mucosa and other parts of the body See the description of lupus erythematosus in the chapter on Macular Eruptions

Objective symptoms The lesions on the buccal mucosa are well defined whitish plaques which are slightly thickened and have an irregular surface The lesion is not a membrane and is not easily removed Ulcers may develop

Subjective symptoms None

Etiology Unknown

Histopathology There is atrophy of the mucous membrane and slight perivascular infiltration in the upper layers of the cutis

Diagnostic aids Biopsy history and physical examination the presence of lesions on other parts of the body blood studies.

Relation to systemic disease Lupus erythematosus is a systemic disease.

Differential diagnosis Leukoplakia moniliasis lichen planus syphilis

Therapy Antimalarial drugs in discoid lupus erythematosus systemic steroid therapy in systemic lupus erythematosus good oral hygiene

Moniliasis

Synonym Thrush candidiasis.

Sites of predilection Mouth, genitocrural region and other areas. See moniliasis in the chapter on Macular Eruptions.

Objective symptoms. On the tongue or buccal mucosa there are discrete or confluent whitish spots which form a membrane resembling curdled milk Forcible removal of this membrane produces bleeding Similar lesions may be found in the vagina and under the prepuce Between the thighs the lesions appear as a whitish film For a more complete description of these and other lesions read the description of moniliasis in the chapter on Macular Eruptions.

Subjective symptoms Depend on the extent of involvement Symptoms may be absent or the patient may have pain

Etiology *Candida albicans*

Diagnostic aids See the description of moniliasis in the chapter on Macular Eruptions.

Histopathology See the description of moniliasis in the chapter on Macular Eruptions.

Relation to systemic disease See the description of moniliasis in the chapter on Macular Eruptions.

Differential diagnosis Leukoplakia lichen planus syphilis.

Therapy See the description of moniliasis in the chapter on Macular Eruption.

Syphilis Early Mucous Membrane Lesion

Synonym Mucous patches condylomata lata split papules chancre

Sites of predilection Mucous membranes of the mouth genitalia and anus

Objective symptoms. 1 Chancre Over 95 per cent of all initial lesions occur on the genitalia In the remaining 5 per cent the lesions may be

found on the tongue buccal mucosa lips, nipples fingers and elsewhere The initial lesion is usually a single well defined markedly infiltrated ulcer with an eroded crusted surface. Multiple chancres are unusual The clinical appearance of the lesion is altered because of the location.

Mucous erosive lesions (mucous patch) These simple erosions are oval or round, varying in size from 1 to cm in diameter They are well defined, superficial reddish or grayish and do not have any inflammatory areola. The lesions may be elevated, infiltrated, and covered with a grayish or whitish membrane

3 Hypertrophic eroded papules (condylomata lata) These lesions, which are found between apposing surfaces, are well-defined, flat topped papules varying in size from 5 mm to 2 cm. in diameter The surface is covered with a grayish or whitish, moist membrane

4 Split papules These lesions which occur at the commissures of the lips are reddish papules in which there is a central split or fissure This fissure is covered with a grayish or whitish membrane

Subjective symptoms Vary from none to moderate pain

Etiology *Treponema pallidum* All of these are moist lesions of early syphilis and the spirochaetes may be demonstrated from any of them by dark field examination

Histopathology See the chapter on Venereal Diseases

Diagnostic aids See the chapter on Venereal Diseases

Differential diagnosis Aphthous stomatitis fusospirillosis diphtheria leukoplakia

Therapy See the chapter on Venereal Diseases

Syphilis Late Mucous Membrane Lesions

Synonym See syphilis in the chapter on Venereal Diseases

Site of predilection Mucous membranes of the oropharynx and the tongue

Objective symptoms The lesions are single or multiple excavated or punched-out ulcers The base of the ulcer may be covered with a grayish-green membrane but there is little or no discharge These lesions are destructive and may distort the entire pharynx Such lesions occurring on the nasal mucosa produce perforation of the nasal septum.

When the tongue is involved by late syphilis, a solitary gumma may develop or because of the dense inflammatory infiltration and subsequent healing, the tongue may become hard smooth, thickened and scarred.

Subjective symptoms. Little or no pain.

Etiology This is a late manifestation of syphilis (gumma)

Histopathology See syphilis in the chapter on Venereal Diseases

Diagnostic aids. See syphilis in the chapter on Venereal Diseases.

Relation to systemic disease This is a systemic disease. See syphilis in the chapter on Venereal Diseases.

Differential diagnosis Aphthous stomatitis geographical tongue fusospirillosis.

Therapy See syphilis in the chapter on Venereal Diseases.

Noma

Synonym Cancrum oris.

Site of predilection Mouth.

Objective symptoms This condition which is usually unilateral may begin as ulcerative stomatitis, or it may begin with the appearance of a small bleb The lesions become gangrenous progress rapidly and form large excavated, necrotic ulcers with irregular undermined mar



FIG 111 Noma



FIG 110 Lingua nigra

been attributed to pathogenic yeasts or other fungi no specific organism has been consistently identified

Histopathology The papillae are hyperkeratotic and hypertrophied.

Diagnostic aids History and physical examination cultures on Sabouraud s medium biopsy

Relation to systemic disease None

Differential diagnosis Condition is characteristic in appearance

Therapy Reassure the patient that it is not a serious systemic disease good dental hygiene mouth washes.

Lupus Erythematosus

Synonym None

Sites of predilection Buccal mucosa and other parts of the body See the description of lupus erythematosus in the chapter on Macular Eruptions

Objective symptoms The lesions on the buccal mucosa are well defined whitish plaques which are slightly thickened and have an irregular surface The lesion is not a membrane and is not easily removed *Ulcers may develop*

Subjective symptoms None

Etiology Unknown

Histopathology There is atrophy of the mucous membrane and slight perivascular infiltration in the upper layers of the cutis.

Diagnostic aids Biopsy history and physical examination the presence of *lesions on other* parts of the body blood studies.

Relation to systemic disease Lupus erythematosus is a systemic disease

Differential diagnosis Leukoplakia moniliasis lichen planus syphilis

Therapy Antimalarial drugs in discoid lupus erythematosus systemic steroid therapy in systemic lupus erythematosus good oral hygiene

Moniliasis

Synonym Thrush candidiasis.

Sites of predilection Mouth genitocrural region, and other areas. See moniliasis in the chapter on Macular Eruptions

Objective symptoms. On the tongue or buccal mucosa there are discrete or confluent whitish *spots which form a membrane resembling* curdled milk Forcible removal of this membrane produces bleeding Similar lesions may be *found in the vagina and under the prepuce* Between the thighs the lesions appear as a whitish film For a more complete description of these and other lesions read the description of moniliasis in the chapter on Macular Eruptions.

Subjective symptoms Depend on the extent of involvement Symptoms may be absent or the patient may have pain

Etiology Candida albicans

Diagnostic aids. See the description of moniliasis in the chapter on Macular Eruptions.

Histopathology See the description of moniliasis in the chapter on Macular Eruptions.

Relation to systemic disease See the description of moniliasis in the chapter on Macular Eruptions.

Differential diagnosis Leukoplakia lichen planus syphilis

Therapy See the description of moniliasis in the chapter on Macular Eruption

Syphilis Early Mucous Membrane Lesion

Synonym Mucous patches condylomata lata split papules chancre

Sites of predilection Mucous membranes of the mouth genitalia and anus

Objective symptoms 1 Chancre Over 95 per cent of all initial lesion occur on *the genitalia* In the remaining 5 per cent the lesions may be

discrete and confluent, sharply defined, shallow ulcers, which vary in size from 2 mm. to 2 cm. in diameter. Individual ulcers have a central, yellowish-white basement membrane and are surrounded by a bright red areola. The lesions may be few or numerous and, if extensive, cause marked destruction of the mucous membrane. Occasionally these ulcers become gangrenous.

Subjective symptoms. The lesions are painful. If the condition is extensive the patient may have difficulty in swallowing. Lesions in the genital area cause difficulty in walking and severe pain on coitus.

Etiology. The condition is probably caused by a virus. It is associated with gastric disturbances, febrile illnesses, leukemia, and other systemic diseases.

Histopathology. Nonspecific.

Diagnostic aids. Clinical appearance, history and physical examination.

Differential diagnosis. Syphilis, tuberculosis, cancrum oris.

Therapy. There is no specific treatment. Treatment of the underlying condition is important. Repeated smallpox vaccinations may be of value in the treatment of recurrent attacks.

Stomatitis, Bismuth or Mercury

Synonym. None.

Sites of predilection. Mouth.

Objective symptoms. There is a thin, blue or dark gray, stippled line which occurs on the gums at the insertion of the teeth, forming a peculiar festooned appearance. The condition is seen on both the buccal and lingual sides of the gums. Occasionally there is redness and swelling of the gums. The tongue may be coated and the breath is usually fetid.

Subjective symptoms. Pain may or may not be a symptom.

Etiology. Caused by deposits of metallic bismuth or mercury in the gums. There may be associated poor dental hygiene. Heavy metal deposit is probably caused by the patient's idiosyncrasy to the drug.

Histopathology. Nonspecific.

Diagnostic aids. History and physical examination, clinical appearance.

Relation to systemic disease. The condition which necessitated the administration of the heavy metal. Kidney damage may be associated with the bismuth or mercury line.

Differential diagnosis. Fusospirillosis.

Therapy. Discontinue the drug. Institute proper dental hygiene.

gins The base of the ulcer is usually covered with a thick grayish membranous exudate which when removed leaves a granulomatous surface The condition may be quite extensive eventually causing a portion of the face to slough.

Subjective symptoms Those associated with the underlying systemic disease Intense pain in the involved area

Etiology The specific etiologic factor is unknown Predisposing causes are devitalization of the tissue following chemical injury or chronic infection

Histopathology Nonspecific

Diagnostic aids History physical examination and biopsy

Relation to systemic disease Agranulocytosis leishmaniasis measles avitaminosis.

Differential diagnosis Syphilis carcinoma tuberculosis

Therapy Treatment is nonspecific The vast majority of these cases have a poor prognosis Broad spectrum antibiotic treatment may be of value

Pemphigus Vulgaris

Synonym None

Sites of predilection Mucous membranes and other parts of the body See pemphigus vulgaris in the chapter on Vesicular Eruptions

Objective symptoms On the buccal mucosa the bullae rupture shortly after formation leaving large denuded areas. The condition may be extensive and involve the entire buccal mucosa, the hard and soft palates and the pharynx The lips are thickened covered with blood crusts and bullae and are fissured The female genitalia may show extensive involvement similar in character The lesions in pemphigus vulgaris may be limited to the mucous membranes or may involve the entire body

Subjective symptoms Pain Inability to swallow if the mucous membranes are extensively involved Generalized malaise

Etiology Unknown

Histopathology See pemphigus vulgaris in the chapter on Vesicular Eruptions

Diagnostic aids See pemphigus vulgaris in the chapter on Vesicular Eruptions.

Relation to systemic disease Pemphigus vulgaris is a systemic disease

Differential diagnosis Erythema multiforme bullosum dermatitis herpetiformis lesions of syphilis

Therapy See pemphigus vulgaris in the chapter on Vesicular Eruptions.

Perlèche

Synonym None

Sites of predilection Commissures of the lips.

Objective symptoms These lesions, which are usually bilateral are superficial or deep fissures at the commissures. The lesions extend a short distance on to the skin and the mucous membrane The mucous membrane in the involved area is usually thickened macerated, and covered with a whitish soggy membrane There may be an eczematous area on the skin surrounding the fissure which is usually covered with a serous crust or whitish membrane In extensive cases there may be marked discomfort when the mouth is opened

Subjective symptoms Vary from itching to severe pain

Etiology The condition may be associated with moniliasis, bacterial infections, or nutritional deficiencies.

Histopathology Nonspecific

Diagnostic aids Culture for *Candida albicans* on *Sabouraud's medium* culture for other organisms on blood agar history and physical examination

Relation to systemic disease The condition may be associated with moniliasis or avitaminosis.

Differential diagnosis The split papule of secondary syphilis.

Therapy Myconef ointment if monilial infection is present Ammoniated mercury ointment (5 per cent) is also of value Search for and eliminate irritating factors

Stomatitis Aphthou

Synonym Stomach ulcers.

Sites of predilection Buccal mucosa the tongue and the genitalia

Objective symptoms The lesions are variously sized

Therapy Restoration of normal hygiene The use of soap and water will remove the pigment

Dyshidrosis

Synonym Pompholyx.

Sites of predilection Hands and feet

Objective symptoms. The lesions, which are usually located on the palmar and plantar surfaces, in the interdigital spaces and on the dorsal surfaces of the digits are numerous deep-seated, tense-walled, small vesicles. There is usually absence of any gross inflammatory process. Secondary pyogenic infection may develop or the condition may become eczematized In addition to the deep-seated small vesicles, tense walled, deep-seated, small, sterile pustules may develop Localized areas consisting of numerous small vesicles and pustules may be surrounded by an exfoliating margin

Subjective symptoms Moderate to intense itching If secondary pyogenic infection develops, pain is the predominating subjective symptom

Etiology The condition may be associated with emotional tension atopic eczema focal infection or combination of these factors

Histopathology There is a subepidermal vesicle surrounded by a chronic inflammatory infiltrate

Diagnostic aids Cultures on Sabouraud's medium must be performed to rule out the possibility of a fungus infection The pustules are usually sterile

Relation to systemic disease The condition may be associated with emotional tension, focal infections nutritional disturbances or atopic states

Differential diagnosis Epidermophytosis epidermophytid contact dermatitis.

Therapy Avoid the use of soap detergents, and other cleansing agents on the hands. Burow's solution (diluted 1 32) may be of value in relieving the edema and drying the vesicles Topical steroid preparations may aid the involution of the lesions Grenz rays are frequently of value

Hidradenitis Suppurativa

Synonym Sweat gland abscesses

Sites of predilection Axillae genito-crural area, peri-anal region and areolae of the breasts.

Objective symptoms. Few to numerous, deep-seated abscesses occur in the axillae These lesions, which involve the apocrine sweat glands, are discrete or confluent variously sized fluctuant nodules containing pus. Deep subcutaneous sinuses develop The lesions heal with dense scar formation.

Subjective symptoms Pain

Etiology The precipitating factor may be an allergic contact dermatitis caused by deodorant with subsequent secondary pyogenic infection. Axillary shaving may also initiate the infection. Varieties of staphylococci are the most common causative factors

Histopathology There is cystic dilatation of the deep part of the glands with destruction of the epithelial lining. There is evidence of an acute inflammatory reaction and subcutaneous abscess formation.

Diagnostic aids Cultures of the pus on blood agar Disc and tube dilution sensitivity tests for antibiotic selection

Relation to systemic disease None usually

Differential diagnosis. Clinical picture is characteristic.

Therapy Incision and drainage of the large fluctuant lesions Systemic administration of the antibiotic of choice as determined by disc or tube dilution sensitivity tests. Frequent cleansing of the involved area with warm boric acid solution, followed by the application of an antibiotic ointment. Roentgen therapy is seldom of value If there is any disabling deformity remaining after the acute pyogenic infection has subsided, plastic repair may be necessary

Hyperhidrosis

Synonym. Excessive sweating.

Sites of predilection May be generalized or localized The lesions may occur on the palms and soles, over the entire body or may be unilateral

Objective symptoms. There is an excessive production of sweat, particularly in times of stress. The condition may appear without apparent cause On the palms and soles the skin becomes soggy pale pink in color and appears waterlogged. The feet may become tender

Chapter 21

SWEAT GLAND LESIONS

Anhidrosis

Synonym Absence of sweating

Sites of predilection Generalized

Objective symptoms The skin is exceptionally dry because of the absence of sweating This condition is common in ichthyosis, exfoliative dermatitis, congenital ectodermal defect scleroderma and roentgen dermatitis Localized anhidrosis may occur due to lesions in the central nervous system

Subjective symptoms Excessive dryness These patients cannot tolerate heat

Etiology Unknown The condition may be associated with a congenital ectodermal defect ichthyosis exfoliative dermatitis extensive psoriasis and other dermatoses

Histopathology The histopathologic picture is not diagnostic

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Related to the conditions productive of the anhidrosis.

Therapy There is no curative therapy Use of lubricating preparations such as Lubriderm and mineral oil may be of value in relieving subjective symptom

Bromidrosis

Synonym Stinking sweat B O

Sites of predilection Feet axillae and genital area

Objective symptoms This condition is not usually present until after puberty The patient who has bromidrosis does not necessarily have excessive perspiration The odor varies in the same individual from time to time It may be mildly unpleasant or a strong penetrating stench

Subjective symptoms The patient is not usually aware of the body stench

Etiology The odor may be caused by bacterial contamination or fermentation of apocrine sweat

Histopathology Nonspecific

Diagnostic aids Clinical symptoms are diagnostic

Relation to systemic disease Many systemic diseases such as uremia carcinoma, and other debilitating illnesses are productive of an unpleasant body odor

Differential diagnosis The odor may be caused by the clothing the patient is wearing his occupation etc

Therapy Simple hygiene The use of deodorant and antiperspirant creams or lotions

Chromhidrosis

Synonym Colored sweat

Sites of predilection Face axillae and genital area

Objective symptoms This is a rare condition characterized by the appearance of colored sweat In the majority of these cases some affection of the apocrine sweat glands is responsible for the production of this unusual symptom The discoloration may be brown red green or black

Subjective symptoms None

Etiology The condition may be caused by the presence of bacteria on the skin surface colored substances on the skin or drug ingestion

Histopathology Nonspecific

Diagnostic aids Clinical appearance is characteristic Cultures for bacteria and fungi should be performed

Relation to systemic disease None usually

Differential diagnosis Clinical appearance is characteristic

Therapy Restoration of normal hygiene The use of soap and water will remove the pigment

Dyshidrosis

Synonym. Pompholyx.

Sites of predilection Hands and feet

Objective symptoms. The lesions which are usually located on the palmar and plantar surfaces in the interdigital spaces, and on the dorsal surfaces of the digits, are numerous, deep-seated, tense-walled, small vesicles. There is usually absence of any gross inflammatory process Secondary pyogenic infection may develop or the condition may become eczematized. In addition to the deep-seated, small vesicles, tense-walled, deep-seated, small, sterile pustules may develop Localized areas consisting of numerous small vesicles and pustules may be surrounded by an exfoliating margin.

Subjective symptoms. Moderate to intense itching. If secondary pyogenic infection develops, pain is the predominating subjective symptom

Etiology The condition may be associated with emotional tension atopic eczema focal infection or a combination of these factors.

Histopathology There is a subepidermal vesicle surrounded by a chronic inflammatory infiltrate

Diagnostic aid Cultures on Sabouraud's medium must be performed to rule out the possibility of a fungus infection. The pustules are usually sterile

Relation to systemic disease The condition may be associated with emotional tension focal infections, nutritional disturbances, or atopic states

Differential diagnosis. Epidermophytosis epidermophytid contact dermatitis.

Therapy Avoid the use of soap detergent and other cleansing agents on the hands. Burow's solution (diluted 1 32) may be of value in relieving the edema and drying the vesicles. Topical steroid preparations may aid the involution of the lesions Grenz rays are frequently of value

Hidradenitis Suppurativa

Synonym. Sweat gland abscesses.

Sites of predilection Axillae genito-crural area, perianal region, and areolae of the breast

Objective symptoms Few to numerous deep-seated abscesses occur in the axillae These lesions which involve the apocrine sweat glands are discrete or confluent variously sized, fluctuant nodules containing pus. Deep subcutaneous sinuses develop The lesions heal with dense scar formation.

Subjective symptoms Pain.

Etiology The precipitating factor may be an allergic contact dermatitis caused by deodorant with subsequent secondary pyogenic infection. Axillary shaving may also initiate the infection. Varieties of staphylococci are the most common causative factors.

Histopathology There is cystic dilatation of the deep part of the glands with destruction of the epithelial lining. There is evidence of an acute inflammatory reaction and subcutaneous abscess formation.

Diagnostic aids. Cultures of the pus on blood agar Disc and tube dilution sensitivity tests for antibiotic selection

Relation to systemic disease None usually

Differential diagnosis. Clinical picture is characteristic

Therapy Incision and drainage of the large fluctuant lesions. Systemic administration of the antibiotic of choice as determined by disc or tube dilution sensitivity tests Frequent cleansing of the involved area with warm boric acid solution, followed by the application of an antibiotic ointment. Roentgen therapy is seldom of value If there is any disabling deformity remaining after the acute pyogenic infection has subsided plastic repair may be necessary

Hyperhidrosis

Synonym Excessive sweating

Sites of predilection. May be generalized or localized The lesions may occur on the palms and soles, over the entire body or may be unilateral

Objective symptoms. There is an excessive production of sweat, particularly in times of stress. The condition may appear without apparent cause On the palms and soles the skin becomes soggy pale pink in color and appears waterlogged. The feet may become tender

Chapter 21

SWEAT GLAND LESIONS

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Synonym Absence of sweating

Sites of predilection Generalized

Objective symptoms The skin is exceptionally dry because of the absence of sweating This condition is common in ichthyosis exfoliative dermatitis, congenital ectodermal defect scleroderma and roentgen dermatitis Localized anhidrosis may occur due to lesions in the central nervous system

Subjective symptoms Excessive dryness. These patients cannot tolerate heat

Etiology Unknown The condition may be associated with a congenital ectodermal defect ichthyosis exfoliative dermatitis extensive psoriasis and other dermatoses

Histopathology The histopathologic picture is not diagnostic

Diagnostic aids Biopsy

Relation to systemic disease None

Differential diagnosis Related to the conditions productive of the anhidrosis

Therapy There is no curative therapy Use of lubricating preparations such as Lubriderm and mineral oil may be of value in relieving subjective symptom

Bromidrosis

Synonym Stinking sweat B O

Sites of predilection Feet axillae and genital area

Objective symptoms This condition is not usually present until after puberty The patient who has bromidrosis does not necessarily have excessive perspiration The odor varies in the same individual from time to time It may be mildly unpleasant or a strong, penetrating stench

Subjective symptoms The patient is not usually aware of the body stench

Etiology The odor may be caused by bacterial contamination or fermentation of apocrine sweat

Histopathology Nonspecific

Diagnostic aids Clinical symptoms are diagnostic

Relation to systemic disease Many systemic diseases such as uremia carcinoma and other debilitating illnesses are productive of an unpleasant body odor

Differential diagnosis The odor may be caused by the clothing the patient is wearing his occupation etc

Therapy Simple hygiene The use of deodorant and antiperspirant creams or lotions

Chromhidrosis

Synonym Colored sweat

Sites of predilection Face axillae and genital area

Objective symptoms This is a rare condition characterized by the appearance of colored sweat In the majority of these cases some affection of the apocrine sweat glands is responsible for the production of this unusual symptom The discoloration may be brown red green or black

Subjective symptoms None

Etiology The condition may be caused by the presence of bacteria on the skin surface colored substances on the skin or drug ingestion

Histopathology Nonspecific

Diagnostic aid Clinical appearance is characteristic Cultures for bacteria and fungi should be performed

Relation to systemic disease None usually

Differential diagnosis Clinical appearance is characteristic.

Chapter 22

NAIL LESIONS

Anonychia

Synonym. Congenital absence of nails

Sites of predilection. Fingernails and toenails.

Objective symptoms. There is usually total absence of all nails on the upper and lower extremities. The nail folds are absent and the dorsal surfaces of the distal phalanges are thin and red

Subjective symptoms. None usually

Etiology Congenital

Histopathology Absence of nail fold and absence of eponychium.

Diagnostic aids. Clinical appearance is characteristic

Relation to systemic disease Other congenital deformities may be present

Differential diagnosis. Clinical appearance is characteristic.

Therapy None effective

Atrophy of the Nail

Synonym Atrophia unguium

Sites of predilection Fingernails or toenails.

Objective symptoms Partial or complete atrophy of the nail plates The condition most commonly occurs on the fingers, and the plates appear lustreless friable and distorted.

Subjective symptoms. None

Etiology Acquired or congenital

Histopathology Nonspecific

Diagnostic aids Clinical appearance is characteristic

Relation to systemic disease None has been established

Differential diagnosis Fungus infections

Therapy None effective

Eczematous Dermatitis of the Nails

Synonym. None

Sites of predilection. Fingernails and surrounding tissue.

Objective symptoms There is usually an ill-defined, confluent infiltrated or edematous, scaling and exudative eruption involving the nail folds. After the eruption has been present for a month or longer changes appear in the nail plates. The nails are discolored, distorted, friable transversely ridged, and frequently shortened at the free edge

Subjective symptoms Itching.

Etiology This condition usually develops as a result of sensitization or primary irritation to some contacted substance Household detergents, nail polish paint remover acids or alkalies, or photographic materials may be causative agents.

Histopathology Nonspecific.

Diagnostic aids Cultures should be made to rule out fungus infections.

Relation to systemic disease None

Differential diagnosis. Onychomycosis psoriasis of the nails.

Therapy In chronic cases the nail defect may be permanent In acute cases remove the patient from exposure to the irritating substance and apply one of the topical steroid preparations.

Hang Nail

Synonym. Agnail.

Sites of predilection Nail folds of the fingers

Objective symptoms. Small tags of skin attached at the proximal end and free at the distal end occur in the lateral, medial, and proximal nail

Localized unilateral hyperhidrosis may involve half the face a small area over one scapula one arm or any discrete or isolated area of the body This condition exists as a result of some organic neurologic lesion

Subjective symptoms Discomfort caused by excessive sweating

Etiology In generalized cases, or in those involving only the palms and soles, the condition may be caused by emotional tension drugs, excessive heat or debilitating diseases such as tuberculosis pneumonia and leukemia

Histopathology Dilatation of the sweat glands in the involved area

Diagnostic aids The clinical appearance is characteristic The patient should have a thorough physical examination and history Study for systemic disease

Relation to systemic disease Tuberculosis leukemia nutritional disturbances hyperthyroidism mental illness.

Differential diagnosis None necessary The clinical appearance is characteristic

Therapy Treatment of the underlying cause The use of anticholinergic drugs may be of value

Miliaria Rubra

Synonym Prickly heat

Sites of predilection May be generalized Frequently limited to the folds of the neck the axillae and the crural regions of infants

Objective symptoms There is an acute onset of a profuse eruption of numerous pin point or slightly larger papules vesicles or papulovesicles Occasionally numerous small pustules are scattered throughout the eruption. One or more of these pustules may develop into furuncles The eruption is common in infants during hot weather It may be precipitated in the winter by the wearing of too much clothing It may appear in the winter months if the child is in an overheated room with poor ventilation. If the condition is neglected or too vigorously treated it may become eczematized, particularly in the skin folds.

Subjective symptoms Itching and burning If furuncles develop the patient has pain

Etiology Contributing factors are excessive heat and humidity indulgence in use of alcohol, citrus fruits and soft drinks by those people who have a tendency to hyperhidrosis

Histopathology Cystic dilatation of sweat ducts because of occlusion of the orifices, with the presence of an acute inflammatory reaction in the upper cutis about the sweat glands.

Diagnostic aids The clinical appearance is characteristic

Relation to systemic disease The condition is common in obesity alcoholism and in those individuals suffering from debilitating diseases.

Differential diagnosis Folliculitis contact dermatitis atopic dermatitis

Therapy Avoid exposure to excessive heat and wear light clothing Infants should be kept in a well ventilated room and wear a minimum of clothing Cold compresses of Burow's solution (1 32) are of great value Bland dusting powders used between apposing surfaces also give relief Light diet Avoid carbonated beverages, citrus fruits, and alcohol

Diagnostic aids. Clinical appearance is characteristic; thorough physical examination and history.

Relation to systemic disease. It may be associated with hypothyroidism, pellagra, or psoriasis.

Differential diagnosis. Fungus infection, psoriasis of the nails.

Therapy. Avoid immersion in soapy water, detergents, or solvents. Avoid overzealous cleansing of the nails. The prognosis is good for the normal regrowth of nail.

Onychomycosis

Synonym. Ringworm of the nails.

Sites of predilection. Fingernail and toenails.

Objective symptoms. The involved nail plate is dark, thickened, friable, distorted, and usually shortened at the free edge. The nail plate is separated from the nail bed by a dense hyperkeratotic or caseous substance. In some instances almost the entire nail may be destroyed by the disease process. The condition may involve all of the nails on both upper and lower extremities or only one or two nails may be involved. The condition is frequently limited to one or both of the great toenails.

Subjective symptoms. Usually none except embarrassment because of the cosmetic defect.

Etiology. The dermatophytes, favus.

Histopathology. By special staining techniques, filaments of the fungi may be seen in the nail bed.

Diagnostic aids. Recognition of fungi by use of the potassium hydroxide or the ink-potassium hydroxide wet preparations; culture on Sabouraud's medium to determine the offending organism.

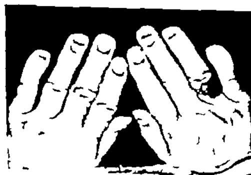


Fig. 112. Onychomycosis.

Relation to systemic disease. None.

Differential diagnosis. Psoriasis of the nails, traumatic onychia.

Therapy. Griseofulvin is effective on systemic administration. Surgical removal of nails is not recommended.

Onychophagia

Synonym. Nail biting.

Sites of predilection. Fingernails.

Objective symptoms. The nail plates are greatly shortened and irregular at the free edge. The degree of deformity varies with different individuals. Some patients bite the nail plate back to the midportion of the nail bed. In such individuals the distal ends of the fingers become bulbous and extend over the position usually occupied by the free edge of the nail.

Subjective symptoms. Those usually associated with emotional stress.

Etiology. Emotional imbalance.

Histopathology. Nonspecific.

Diagnostic aids. The clinical appearance is characteristic; thorough history and physical examination.

Relation to systemic disease. Associated with tension states.

Differential diagnosis. The clinical appearance is characteristic.

Therapy. Psychotherapy.

Onychorrhexis

Synonym. Brittleness of the nails.

Sites of predilection. Fingernails.

Objective symptoms. The nail plates are lustreless and thin. There is frequently sagittal splitting or peeling of the nail plates. Plates are shortened at the free edge.

Subjective symptoms. None.

Etiology. The condition may be caused by nail polish, polish removers, or self inflicted trauma.

Histopathology. Nonspecific.

Diagnostic aids. Clinical appearance is characteristic.

Relation to systemic disease. This condition is oc-

folds If these filaments are pulled back they tend to tear into the tissue This may become a site of pyogenic infection

Subjective symptoms Itching or pain

Etiology The condition may develop as a result of too frequent use of household detergents or solvents. Biting of the fingernails is a predisposing factor

Histopathology Nonspecific

Diagnostic aids The clinical appearance is characteristic

Relation to systemic disease None

Differential diagnosis Clinical appearance i char acteristic

Therapy Clip the tags of the skin with sharp scissors Avoid frequent contact with deter gents and solvents Discontinue biting the nails. Push back cuticles with an orange stick as a *prophylactic measure*

Ingrowing Nail

Synonym Unguis incarnatus.

Sites of predilection Toenails most commonly the great toenail

Objective symptoms This condition most commonly involves the great toenail The involved nail fold becomes swollen red and exudes serum or pus. A pyogenic granuloma frequently appears in the fold and grows across the nail plate The sharp sides of the nail plate cut into the nail grooves opening avenues for entrance of infec tion Cellulitis and lymphangitis may develop

Subjective symptoms Severe pain

Etiology Faulty trimming of the nails, tight shoes and secondary pyogenic infection

Histopathology Nonspecific

Diagnostic aids Clinical picture is characteristic culture of the exudate may be necessary

Relation to systemic disease None usually

Differential diagnosis Onychomycosis pyogenic granuloma other tumors

Therapy Eradicate secondary infection by the use of hot boric acid soaks and the applica tion of antibiotic ointments. Remove the por tion of the nail which is cutting into the tissue Pack the nail fold with cotton so that when the nail regrows it will fill the nail groove *Institute* proper nail hygiene Wear properly fitting shoes.

Onychogryphosis

Synonym Claw nail talon nail

Sites of predilection Toenails.

Objective symptoms This condition which may be acquired or congenital and involve one or more *nails is* characterized by a hypertrophic over growth of the nail plate It may *appear as a complication of chronic scaling* dermatoses or in association with keratoderma palmaris et plantaris The nail plates *are brittle and friable* In cases of extreme hypertrophy the nail plates may become greatly elongated and claw like Simple hypertrophy of the nail is known a *onychauxis*

Subjective symptoms None usually

Etiology Acquired or congenital

Histopathology Marked thickening of the nail plate.

Diagnostic aids Culture should be made to rule out fungus infections history and physical exami nation

Relation to systemic disease This condition may develop in obese individuals, arthritic patient and in the aged

Differential diagnosis Fungu *infection of the nail* bed

Therapy Mechanical removal of the nail plate by the use of clippers or electric drill Surgical removal may be necessary

Onycholysis

Synonym None

Sites of predilection Fingernails.

Objective symptoms This condition characterized by separation of the nail plate from the nail bed usually begin *with the development of a* brownish arc or brownish spot at the distal edge of the nail The condition is slowly progressive and may extend from the free edge of the nail to the lunula or may involve only a portion of the nail The nail plates are lusterless

Subjective symptoms None

Etiology The separation may be caused by over zealous cleansing behind the nails or constant immersion in *household detergent It may* be associated with systemic diseases or other der *matoses*.

Histopathology Nonspecific

Differential diagnosis Onychomycosis eczema of the nails onychia.

Therapy None specific or effectual. See psoriasis in the chapter on Papular Eruptions.

Pterygium

Synonym None

Sites of predilection. Fingernails.

Objective symptoms There is an abnormal extension of the skin of the proximal nail fold over the lunula at the proximal portion of the nail plate

Subjective symptoms. None

Etiology May be caused by poor nail hygiene or excessive x-ray therapy

Histopathology Nonspecific

Diagnostic aids. The clinical appearance is characteristic.

Relation to systemic disease None

Differential diagnosis. The clinical appearance is characteristic

Therapy Removal of the pterygium by cutting or by the use of 5 per cent to 10 per cent salicylic acid in 85 per cent alcohol

Spoon Nail

Synonym Koilonychia

Sites of predilection Fingernails

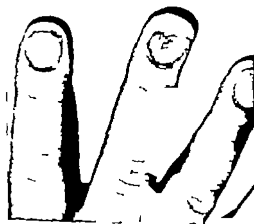


Fig. 113 Spoon nail

Objective symptoms. The nail plates are thin In each nail there is a central concavity and the free edge of the plate is everted.

Subjective symptoms None

Etiology Congenital or acquired.

Histopathology Nonspecific.

Diagnostic aids Clinical appearance is characteristic the patient should be surveyed for systemic disease

Relation to systemic disease Condition has occurred in association with syphilis, acanthosis nigricans pernicious anemia, and the Plummer Vinson syndrome

Differential diagnosis. Clinical appearance is characteristic

Therapy None effective

Transverse Furrows or Transverse Bands

Synonym Beau's lines.

Sites of predilection Fingernails.

Objective symptoms Transverse furrows appear on the nail plates, beginning in the proximal portion and progressing distally as the nail grows. Usually all of the nails are involved. These transverse arcuate furrows may be preceded by thin whitish bands.

Subjective symptoms None

Etiology This condition, caused by a sudden change in the growth zone is associated with systemic illness.

Histopathology A defect in the normal matrix cells of the nails, and a break in the continuity of the nail plate

Diagnostic aids. Clinical appearance is characteristic

Relation to systemic disease The condition indicates some systemic disease such as scarlatina, pneumonia, or other febrile illness.

Differential diagnosis. Clinical appearance is characteristic.

Therapy Prognosis for the regrowth of the nails to their normal state is good.

casionally observed in emotional tension hypothyroidism and in protein deficiency diseases.

Differential diagnosis Clinical appearance is characteristic

Therapy Avoid the use of nail polishes and polish remover The nails should be kept short and the patient should be encouraged to wear gloves during the course of employment A file or an emery board should be used to keep the nail plates short Treat the underlying systemic disease

Paronychia Monilial

Synonym None

Sites of predilection Proximal nail folds and nail plates

Objective symptoms There is swelling of the proximal nail fold and the medial and lateral folds. Thick white caseous material may be expressed in acute cases. The nail plates are discolored particularly on the sides and at the proximal portions. There is occasionally some scaling of the nail plate and distortion of the most proximal portion In chronic cases the entire nail plate is distorted

Subjective symptoms Itching or pain

Etiology *Candida albicans* The condition is common in housewives Immersion in detergents or alkaline solutions destroys the protective pterygium of the proximal nail fold and allows easy access to bacteria and fungi

Histopathology Nonspecific

Diagnostic aids Culture on Sabouraud s medium or mycosal agar for fungi

Relation to systemic disease None usually In some patients there is a history of recent antibiotic therapy

Differential diagnosis Paronychia caused by pyogenic bacteria

Therapy Avoid immersion in soapy solutions, detergent solutions, solvents or other irritating substances. Application to the involved areas of Myconef or Mycolog ointment or lotion

Paronychia Purulent

Synonym None

Sites of predilection Periungual tissues of the fingers or toes

Objective symptoms The condition has an acute onset The skin of the nail fold is edematous and erythematous Pustules or vesicles may appear over the surface The areas are tender and, on slight pressure pus may be expressed from the nail fold This condition causes temporary or permanent distortion of the nail plate One or more fingers or toes may be involved

Subjective symptoms Pain

Etiology Introduction of pyogenic bacteria into the nail folds by trauma Forcible removal of a hangnail may precipitate the condition

Histopathology Nonspecific.

Diagnostic aids Culture of the pyogenic bacteria on blood agar In resistant cases disc or tube dilution sensitivity tests should be done for antibiotic selection

Relation to systemic disease None

Differential diagnosis Monilial paronychia or other fungus infections.

Therapy Hot applications of boric acid solution followed by the application of an antibiotic ointment Incision and drainage may be necessary Systemic antibiotic administration is necessary for resistant cases.

Psoriasis of the Nail

Synonym None

Sites of predilection Nails and other areas See psoriasis in the chapter on Papular Eruptions

Objective symptoms Only one or two nails may be affected or all nails may be involved. The presenting symptoms may be limited to the formation of pits scattered over one or more of the nail plates or the nail or nails may be pitted friable shortened ridged and discolored In some instances the nail plates are thickened and elevated from the nail bed by thickly packed whitish hyperkeratotic material

Subjective symptoms None except the embarrassment produced by the cosmetic defect

Etiology Unknown

Histopathology See psoriasis in the chapter on Papular Eruptions

Diagnostic aids Biopsy history and physical examination culture to rule out fungus infection

Relation to systemic disease May appear in conjunction with psoriatic arthropathy

Differential diagnosis. Other eczematous conditions

Therapy Preventive Avoid the use of the dhobie mark. Treat the involved area with 1 per cent hydrocortisone ointment or lotion.

Dengue

Synonym Break-bone fever

This mosquito-borne disease is characterized by a severe febrile course retrobulbar pain, and intense pain in bones and joints. Several days after the onset the patient develops an ill-defined pinkish, macular eruption over the trunk. Purpura and petechiae occur over the distal portions of the extremities Axillary lymphadenopathy is a frequent finding The condition is self-limited Complications are rare

Diphtheria

The *Corynebacterium diphtheriae* is a frequent secondary invader in eczemas, epidermophytosis and tropical ulcers. In all cases of long-standing lesions which are resistant to therapeutic measures and show no tendency to heal, smears and cultures should be made to determine the presence of this organism Neuritis, cardiac involvement, and other toxic manifestations develop as a result of cutaneous diphtheria

Diphyllobothriasis

Synonym Tape worm.

Occasionally the parasite invades the skin and produces pseudotumors on the lower extremities. Elephantiasis may develop with a pruritic acneform eruption in the overlying skin

Dracontiasis

Synonym Guinea worm infestation.

Countries India northern Africa, northern Egypt

Site of predilection Legs

Objective symptoms A small rounded nodule appears on foot near the ankles Extending upward from this is a tortuous, cord-like mass Occasionally a small ulcer forms at the site of the worm's head at the time the embryos are released Urticaria and asthma may accompany attack

Subjective symptoms Itching and pain.

Etiology Dracunculus medinensis (a worm)

Therapy Inject tumor with 1 1000 bichloride of mercury and extract the worm. Natives extract the worm by rolling it on a stick and removing a few inches each day These worms may be several feet in length

Filariasis

Synonym Elephantiasis pachydermia.

Sites of predilection Legs scrotum, breasts and forearms.

Objective symptoms. Onset may be marked with fever and severe systemic symptoms. The affected part becomes edematous and inflamed and may drain a milky fluid This symptom complex recurs frequently and increases in severity with each attack until the affected part is permanently enlarged The overlying skin becomes markedly thickened thrown into folds, and verrucoid in appearance

Subjective symptoms. Severe pain with attack accompanied by fever and systemic symptoms.

Etiology Wuchereria bancrofti

Histopathology Edema fibrosis, and lymph stasis. The epidermis is acanthotic and verrucoid.



FIG 114 Filariasis A Funiculitis and adenopathy B Scrotal lesion C Beginning elephantiasis D Elephantiasis

Chapter 23

TROPICAL DISEASES

TROPICAL DERMATOSES

In tropical or subtropical regions many common dermatoses are modified by conditions of climate to assume bizarre forms and more extensive involvement These eruptions include fungus infections acneform eruptions eczematous conditions and the pyodermas Conditions indigenous to the tropical zones include tinea imbricata yaws pinta filariasis mycetoma tropical ulcer ainhum and leishmaniasis

Ainhum

Synonym Spontaneous loss of little toe
Countries Africa and India
Sites of predilection Fifth metatarsophalangeal joint
Objective symptoms Begins as an area of marked hyperkeratosis on the plantar surface of the fifth metatarsophalangeal joint across which runs a transverse groove or fissure This groove deepens and extends until it surrounds the toe The lesion may swell ulcerate and discharge Eventually the constricting band causes spontaneous amputation of the digit This disease occurs only in Negroes
Subjective symptoms Severe pain on motion
Etiology Unknown
Histopathology Nonspecific
Diagnostic aids Clinical appearance
Relation to systemic disease None
Differential diagnosis Raynaud's disease Buerger's disease
Therapy Surgical amputation

Alastrim

Synonym Kaffir smallpox
This is a relatively rare condition in which the symptoms are similar to mild variola or severe varicella The prognosis is good

Amoebiasis Cutis

Relatively rare Ragged ulcers occur in the perianal area extending on to the rectal mucosa Occasionally following operation on an infected bowel the patient may develop ragged ulcers at the site of the wound in the abdominal wall The organism may be recovered from the margins of the ulcer This condition responds readily to injections of emetine hydrochloride

Urticaria frequently accompanies an attack of intestinal amoebiasis.

Dhobie Mark Dermatitis

Synonym Dhobie itch washerman's mark dermatitis.
Countries India
Site of predilection Areas exposed to dhobie mark such as the back of the neck the waist and the heels.
Objective symptoms The first symptoms are well defined localized areas of erythema which develop a few hours after exposure These rapidly become edematous and within a few hours are covered with numerous small discrete and confluent closely aggregated tense vesicles The original lesions spread to involve larger areas in the same vicinity Secondary pyogenic infection may occur
Subjective symptoms Intense itching
Etiology Juice of the helu nut used for laundry marks
Histopathology That of contact dermatitis
Diagnostic aids Patch tests
Relation to systemic disease None

Differential diagnosis. Pediculosis fungus infections.

Therapy Shave the axillae and cleanse the skin with mild antiseptics.

Leprosy

Synonym. Lepra, elephantiasis graecorum, leontiasis.

Countries Asia Africa Pacific Islands, Japan, Great Britain, and sporadic cases in the United States.

Sites of predilection See the description of leprosy in the chapters on Macular and Papular Eruptions

Loaiasi

Synonym. Calabar swelling loa loa.

Countries. Africa

Sites of predilection Face trunk, and extremities.

Objective symptoms Large painless swellings resembling giant hives. Urticaria and eosinophilia are present

Subjective symptoms Itching and malaise.

Etiology Loa loa.

Therapy Surgical removal of the worm parenteral use of antimony compounds

Mycetoma

Synonym. Madura foot podelkoma mossy foot fungus foot of India.

Countries India North Africa Brazil and the southern part of the United States

Sites of predilection See the discussion of mycetoma in chapter on Mycology

Onchocerciasi

Synonym. Craw craw

Countries Central America Africa

Sites of predilection Trunk extremities and face.

Objective symptoms The eruption begins with the formation of follicular papules topped with hyperkeratotic plugs usually on the extremities and trunk but not on the face and scalp Pustules and ulcerating plaques heal with scar formation Urticaria and systemic symptoms occur and tumor-like lesion may develop on the head If these lesions develop on the eye permanent blindness occurs

Subjective symptoms Fever malaise gastric upsets, and itching. Pain, with tumor lesions

Etiology Onchocerca volvulus

Therapy Preventive by destroying flies, etc. Excise tumors as they appear

Paracoccidioidal Granuloma

Synonym South American blastomycosis Almeida s disease.

Countries Northern part of South America, Central America.

Sites of predilection Buccal mucosa, pharynx, skin.

Objective symptoms Lesions may begin on the tongue tonsils or buccal mucosa as papillary vegetations similar to condylomata acuminata These lesions spread to the lips, nose and the surrounding skin. The fungus may enter through an abrasion on the skin and a primary lesion will develop at the site of inoculation becoming a precursor to generalized cutaneous involvement. The cutaneous lesions also resemble condylomata acuminata and are granulomatous. Pus which accumulates between the verrucae produces crusting. No constitutional symptoms are produced until later The disease usually has a fatal termination

Subjective symptoms Discomfort caused by obstruction of the nasopharynx. Late in the course of the disease the general systemic symptoms are pronounced.

Etiology Paracoccidioides brasiliensis.

Diagnostic aids Biopsy and culture on Sabouraud s medium and blood agar

Relation to systemic disease. Paracoccidioidal granuloma is a systemic disease

Differential diagnosis Other deep fungus infections, other granulomas.

Therapy Amphotericin B stilbamidine 2-hydroxy stilbamidine

Pinta

Synonym. Carate mal de pinta spotted disease

Countries Mexico Central America.

Sites of predilection Entire body more marked on head and extremities.

Objective symptoms. The onset is marked by mild fever which lasts for a few days and is followed by an eruption of variously sized macules

Diagnostic aids Demonstration of the filaria in blood smears biopsy

Relation to systemic disease Filariasis is a systemic disease

Differential diagnosis Other conditions which cause lymphatic obstruction

Therapy Remove the patient from the tropics if possible pressure bandage the involved areas avoid surgery on the extremities. A plastic operation is the only satisfactory means of treatment for breast and scrotal lesions

Jungle Rot

This term was coined in the South Pacific by the American soldiers in the fall of 1942 and has been used to designate a variety of conditions. It was most frequently applied to severe epidermophytosis, various manifestations of eczema contact dermatitis, atabrine dermatitis and widespread eruptions caused by overzealous therapy This is not a specific term

Leishmaniasis

Synonym Espundia uta leishmaniasis of the *Brazilian forests.*

Countries Mexico South America

Sites of predilection Exposed parts of the body cartilage and bones of the nasopharynx

Objective symptoms A primary stage and a late stage form the two distinct phases of the disease The primary stage occurs after an incubation period of 1 to 3 months and is marked by the appearance on the lips, face neck palms, soles, penis, female genitalia, or scalp of a crusted ulcer (*espundic chancre*) which heals after a period of months or years with a characteristic star-shaped scar The late stage occurs after a period of from 1 to 20 years with the formation of granulomatous ulcers and destruction of bone and cartilage in the nasopharynx The tongue is almost invariably spared Verrucous enlargements of the nose and face may occur Marked lymphangitis is present in both the early and late phases

Subjective symptoms Vary from slight itching to intense pain depending on the type of involvement

Etiology *Leishmania brasiliensis*

Diagnostic aids Biopsy

Relation to systemic disease Leishmaniasis is a systemic disease.

Differential diagnosis Other granulomas.

Therapy Intravenous injections of tartar emetic intramuscular injections of Fuadin or neostibosan

Leishmaniasis Tropical

Synonym Oriental sore oriental boil Biskra button Aleppo boil desert sore Delhi boil

Countries India

Sites of predilection Ears face legs and arms.

Objective symptoms After an incubation period of 1 to 5 years a small papule develops on the infected site This gradually enlarges, softens in the center and breaks down to form an ulcer 1 to several cm in diameter The disease is self limited and even without therapy will involute with scar formation and no sequelae

Subjective symptoms Usually absent

Etiology *Leishmania tropica* carried by insect vectors.

Diagnostic aids Demonstration of organism

Therapy Parenteral use of antimony preparations. Local use of iodine or mercuric chloride

Lepothrix

Synonym Trichomycosis nodosa trichomycosis axillaris flava nigra and rubra

Sites of predilection Axillary hair

Objective symptoms Numerous firm yellowish brownish or blackish concretions surrounding the hair shafts. These masses which are actually chains and clumps of microorganisms, are bound to the hair shafts by a cement like substance Occasionally the hairs are fractured The surrounding skin may be pinkish in color because of an inflammatory process

Subjective symptoms Usually none May have slight itching

Etiology Variety of microorganisms

Histopathology The concretions on the hair shafts are formed of masses of microorganism in a homogeneous substance resembling chitin

Diagnostic aids Microscopic examination of the involved hair

Relation to systemic disease None

form ulcers, which spread peripherally to involve large areas, sometimes encircling the leg. The ulcers have precipitous margins and dirty greenish-gray bases.

Subjective symptoms. Pain at the site of the lesion.

Etiology. Filth. Varieties of microorganisms have been found including a species of spirochete similar to *Spirocheta vincenti*. Staphylococci and streptococci have also been found.

Histopathology. Nonspecific.

Diagnostic aids. Clinical appearance of the lesion, history and physical examination, cultures of the lesion on blood agar.

Relation to systemic disease. None.

Differential diagnosis. Gummas, tuberculosis, other granulomas.

Therapy. Hygiene. Antibiotic ointments may be of value. Ambulatory treatment is not practical. It may be necessary to utilize plastic repair with a skin graft.

Tsutsugamushi Fever

Synonym. Japanese river fever.

This disease is characterized by the appearance of a necrotic ulcer at the site of inoculation and the development of a petechial eruption involving the palms, soles, face, trunk, and forearms. It is caused by a rickettsia and has a high mortality rate.

Uncinariasis

Synonym. Hookworm.

Frequently the early symptoms are ignored or misdiagnosed as epidermophytosis. At the site of inoculation of the parasite one may find a vesicular eruption on the soles which resembles fungus infection.

Yaws

Synonym. Frambesia, pian, treponematosis.

Countries. Central and South Pacific Islands, North Africa, West Indies, Asia. Occurs only in natives.

Site of predilection. In the early stages only the skin is involved; later destructive lesions appear in the bone and soft tissue.



FIG. 116. Yaws. *A and B*, Primary lesions. *C and D*, Secondary yaws.

Objective symptoms. The primary lesion or "mother yaw" usually occurs on the feet or legs and begins as a papule or small nodule which breaks down to form a granulomatous mass, usually topped with a serosanguinous crust. The margins of this lesion are folded back like petals. In one to four weeks, secondary lesions develop and vary in appearance from dull reddish papules to large pustules and crusted ulcers. The crusts covering the ulcers have a piled up appearance ("oyster shell crust").

which may be white red yellowish brownish or violaceous. The lesions are sharply defined and may be covered with a furfuraceous or lamellated scale When the lesions undergo involution permanent depigmentation remains

Subjective symptoms. Onset of the eruption may be marked with mild malaise and slight itching

Etiology *Treponema carateum*

Diagnostic aids Demonstration of the Treponema by dark field examination The lesions must first be scarified in order to obtain the serum Blood serologic tests.

Relation to systemic disease Pinta is a systemic disease

Differential diagnosis Vitiligo fungus infections.

Therapy The treatment is the same as the treatment for syphilis Penicillin is the drug of choice

Strongyloidosis

This disease is caused by the *Strongyloides stercoralis* and primarily involves the intestinal tract At the time of invasion it produces severe pruritus and localized urticaria.

Tinea Imbricata

Synonym Tokelau ringworm Burmese ringworm

Countries Fiji Islands Solomon Islands; India Occurs only in the natives

Sites of predilection Trunk and extremities

Objective symptoms Begins as a pinkish or reddish macule eventually covered with an adherent whitish scale which peels toward the margin of the lesion Scaling continues to form in the central portion and as the lesion spreads peripherally concentric and polycyclic figures are formed. Annular lesions occur The disease is persistent

Subjective symptoms Varying degrees of itching

Etiology *Endodermophyton concentricum*

Histopathology The fungi may be seen in the stratum corneum by use of the Hotchkiss McManus stain

Diagnostic aids Microscopic examination of scales with potassium hydroxide or the ink potassium hydroxide stain



FIG 115 Tinea imbricata

Relation to systemic disease None

Differential diagnosis Other fungi infections pityriasis rosea seborrheic dermatitis

Therapy None permanently effective Five per cent salicylic acid ointment i of some value in removing the scale

Tropical Ulcer

Synonym Tropical phagedenic ulcer Aden ulcer Malabar ulcer Naga sore desert sore

Countries Common in all tropical countries.

Sites of predilection Legs usually the lower third

Objective symptoms The lesions begin as small papules or vesicles. These undergo necrosis to

Chapter 24

PERIPHERAL VASCULAR DISEASES

Peripheral Vascular Diseases

Diseases of the peripheral blood vessels may be classified as follows

I Intrinsic diseases of the peripheral blood vessels
- A. Congenital anomalies
  - 1 Arteriovenous aneurysm
- B. Nevi
  - 1 Port wine stain (nevus flammeus)
  - 2 Hemangiomas
    - a. Superficial (strawberry mark, hemangioma simplex)
    - b Deep
    - c Nevus araneus (spider nevus)
- C Tumors
  - 1 Glomus tumor
  - 2 Angiosarcoma
  - 3 Angioendothelioma
  - 4 Senile angiomas and angiokeratomas
  - 5 Adenoma sebaceum
  - 6 Multiple idiopathic hemorrhagic sarcoma (Kaposi)
- D Traumatic
  - 1 Arteriovenous aneurysm
  - Erythema ab igne
  - 3 Frostbite
  - 4 Varix of the lips, and other isolated varices
  - 5 Cutis marmorata
  - 6 Radiodermatitis

II Inflammatory and obstructive lesions of the peripheral vessels associated with systemic disease
- A Capillaries
  - 1 Idiopathic telangiectasia
  - 2 Hereditary telangiectasia
  - 3 Hemosideroses
    - a. Purpura annularis telangiectodes
    - b Schamberg's disease
    - c Pigmented purpuric lichenoid dermatitis
  - 4 Necrobiosis lipoidica diabeticorum
- B Veins
  - 1 Varicose veins
  - 2 External thrombotic hemorrhoids
  - 3 Thrombophlebitis and phlebothrombosis
- C Arteries
  - 1 Arteriosclerosis
  - 2 Periarteritis nodosa
  - 3 Buerger's disease (thromboangiitis obliterans)
  - 4 Diabetes mellitus (arteriosclerosis)
  - 5 Erythromelalgia
  - 6 Syphilis

III Functional disturbances of the peripheral vessels, associated with systemic disease.
- A. Psychosomatic responses
  - 1 Angioneurotic edema
  - 2 Flush or blush
  - 3 Red sweaty palms
  - 4 Acrocyanosis
- B Organic lesions ("collagen vascular" disease)
  - 1 Raynaud's disease
  - 2 Scleroderma
  - 3 Dermatomyositis
  - 4 Lupus erythematosus
  - 5 Periarteritis nodosa

The objective symptoms of many peripheral vascular diseases are primarily cutaneous These will be described in detail, here or elsewhere in the text.

Tertiary or late yaws appears in from 1 to 3 years, forming destructive gummatous lesions in bone or skin

Subjective symptoms Variable degrees of itching and occasionally transient fever with early yaws. Pain with late yaws lesions.

Etiology *Treponema pertenue*

Histopathology Histopathologic picture is similar to that observed in syphilis

Diagnostic aids. Demonstration of the *Treponema pertenue* by dark field examination from early lesions. Blood serologic tests.

Relation to systemic disease Yaws is a systemic disease

Differential diagnosis Syphilis tuberculosis deep fungus infections other granulomas.

Therapy The same as the therapy for syphilis. Penicillin is the drug of choice

Chapter 24

PERIPHERAL VASCULAR DISEASES

Peripheral Vascular Disease

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    1 Glomus tumor
    2. Angiosarcoma
    3. Angioendothelioma
    4 Senile angiomas and angiokeratomas
    5. Adenoma sebaceum
    6. Multiple idiopathic hemorrhagic sarcoma (Kaposi)
  D Traumatic
    1 Arteriovenous aneurysm
      Erythema ab igne
    3 Frostbite
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  A. 1 Vasomotor responses
    1 Angioneurotic edema
    2 Flush or blush
    3 Red, sweaty palms
    4 Acrocyanosis
  B. Organic lesions ("collagen vascular" disease)
    1 Raynaud's disease
    2 Scleroderma
    3 Dermatomyositis
    4 Lupus erythematosus
    5. Periarteritis nodosa

The objective symptoms of many peripheral vascular diseases are primarily cutaneous. These will be described in detail here or elsewhere in the text.

Adenoma Sebaceum

This has been described in the chapter on Papular Eruptions.

Angiokeratoma

This has been described in the chapter on Papular Eruptions

Angioneurotic Edema

This condition is described in the chapter on Papular Eruptions

Arteriosclerosis

Synonym Hardening of the arteries.

Sites of predilection Cutaneous symptoms are usually noted on the distal portions of the lower extremities.

Objective symptoms Occlusion or extreme narrowing of the lumen of an artery may result in anoxia of the distal portion of the extremity causing dry atrophy of the digits, which become black and undergo spontaneous amputation

Subjective symptoms Moderate to severe pain in the affected extremity Intermittent claudication is a frequent symptom.

Etiology Calcification of the wall of the artery with resultant narrowing of the lumen

Histopathology Loss of elastic tissue and calcification of artery wall

Relation to systemic disease Other evidences of arteriosclerosis include cerebral and cardiac symptoms.

Diagnostic aids History and physical examination

Differential diagnosis Raynaud s disease Buerger s disease

Therapy None effective

Cutis Marmorata

This condition is described in the chapter on Macular Eruptions.

Dermatomyositis

This condition is described in the chapter on Macular Eruptions.

Erythema ab Igne

This has been described in the chapter on Macular Eruptions.

Frostbite

Synonyms. Dermatitis congelationis trench foot immersion foot

Sites of predilection Nose ears, cheeks, fingers, and toes.

Objective symptoms The symptoms vary from a mild transitory erythema to a deep-seated inflammatory process which involves nerves and blood vessels and frequently results in gangrene

The milder degrees of frostbite are evidenced by erythema and edema and occasionally vesiculation In the more severe forms, gangrene may occur without vesicle formation Pulses may be absent Bones may be involved The condition tends to recur on re-exposure to cold.

Subjective symptoms Vary from mild paresthesias to severe pain

Etiology Usually associated with prolonged exposure to below freezing temperatures. Symptoms may follow immersion in cold water wearing wet shoes or socks, or standing on cold ground for long periods (as soldiers in combat)

Histopathology Occlusion of superficial blood vessels with resultant cutaneous changes.

Diagnostic aids History and physical examination

Relation to systemic disease None usually

Differential diagnosis Raynaud s disease

Therapy Prophylaxis is the best treatment Clean dry socks and shoes should be worn and changed frequently

If gangrenous changes are present the patient should be made ambulatory in spite of the severe pain This may help to avoid surgical intervention

Mild frostbite is treated by gentle friction and gradual elevation of the temperature

Glomus Tumor

This has been described in the chapter on Papular Eruptions.

Hemangioma

This condition has been described in the chapter on Papular Eruptions

Hereditary Hemorrhagic Telangiectasia

Synonym. Rendu-Osler Weber syndrome.

Sites of predilection. Face tongue buccal surfaces nasal septum viscera

Objective symptoms. Multiple telangiectases and angiomas occur on the sites of predilection Visceral telangiectases rupture and cause hemorrhages of serious proportion which may be fatal

Subjective symptoms. Discomfort associated with hemorrhage plus the psychic trauma associated with the cosmetic defect

Etiology. Familial in origin.

Histopathology. Not characteristic.

Diagnostic aids. History and physical examination hemograms

Relation to systemic disease. The disease is systemic

Differential diagnosis. Multiple benign telangiectases senile angioma purpura.

Therapy. None effective Transfusions may be necessary

Lupus Erythematosus

This is described in the chapter on Macular Eruptions.

Nevus Araneus

Synonym. Spider nevus

This is described in the chapter on Macular Eruptions

Nevus Flammeus

Synonym. Port wine stain

This disease has been described in the chapter on Macular Eruptions

Periarteritis Nodosa

This condition is described in the chapter on Papular Eruptions

Purpuric Pigmented Eruptions of the Lower Extremities

Synonyms. Purpura annularis telangiectodes Schamberg disease pigmented purpuric lichenoid dermatitis. These are probably variants of the same condition.

These conditions have been described in the chapter on Macular Eruptions.

Raynaud's Disease

This condition is described in the chapter on Macular Eruptions.

Scleroderma

This condition is described in the chapter on Macular Eruptions

Telangiectasia

Synonym. None

Sites of predilection. Face trunk, and other areas

Objective symptoms. Tortuous dilated small blood vessels develop on the nose and contiguous portions of the cheeks. Other areas of the body may be affected The condition is not inflammatory

Subjective symptoms. Depend on the severity of the condition and the underlying disease

Etiology. The variety of causes includes x-ray damage actinic rays alcoholism drug reactions, liver disease blood dyscrasias, etc. Telangiectasia may be associated with rosacea or may occur following prolonged, repeated exposure to sun wind, or excessive heat

Histopathology. Dilated vessels usually little or no inflammation is present.

Diagnostic aids. History and physical examination hemogram and other appropriate laboratory studies

Relation to systemic disease. Cirrhosis of the liver rosacea allergic reactions, and malignancies are among those conditions which produce telangiectasia.

Differential diagnosis. None usually necessary

Therapy. If the cosmetic defect is annoying, the vessels may be treated with electrolysis (occlusion by the galvanic or high frequency current) Treat the underlying disease

Thromboangiitis Obliterans

Synonym. Buerger's disease.

Sites of predilection. Extremities.

Objective symptoms. This condition may be unilateral or bilateral. Scattered areas of obliterative endovasculitis of arteries and veins cause symptoms which include gangrene of toes, ulcers and other dystrophies. Arterial pulsations may be absent



FIG 117 Buerger's disease

Subjective symptoms None to severe pain

Etiology Buerger's disease has been associated with the use of tobacco in any form The condition occurs most frequently in men

Histopathology Vasculitis with thrombus formation at intervals along the course of arteries and veins.

Diagnostic aids Biopsy history and physical examination

Relation to systemic disease This is a disease of peripheral blood vessels

Differential diagnosis Thrombophlebitis Raynaud's disease arteriosclerosis

Therapy Of little value Avoid use of tobacco Amputation of part or all of the affected extremity may be necessary

Varicose Vein

Synonym None

Sites of predilection Lower extremities scrotum occasionally trunk.

Objective symptoms Dilated tortuous superficial, and deep veins occasionally forming large cutaneous masses. Palpable thrombus formation may occur Inflammatory reaction in the vein walls may predispose to clot formation (*phlebothrombosis*) If these thrombi become infected intense pain may result (*thrombophlebitis*) Ulceration may occur caused by slight trauma or spontaneous rupture of a dilated vein.

Subjective symptoms None to intense pain in the extremities

Etiology Weakening of the valves in the veins

Histopathology Dilated vessels. If inflammatory reaction is present there may be an infiltration of pus cells or thrombus formation

Diagnostic aids. History and physical examination.

Relation to systemic disease None usually although an abdominal mass productive of increased venous pressure predisposes to varicosities.

Differential diagnosis The condition is characteristic

Therapy Multiple ligation and excision of affected veins.

Varix of the Lip

Synonym None

Sites of predilection Usually the lower lip

Objective symptoms The lesions are small purplish soft masses measuring 1 to 3 mm in diameter They are easily compressed free of blood unless an organized thrombus is present

Subjective symptoms The cosmetic defect causes some concern

Etiology May be caused by trauma

Histopathology Dilated vein containing a clot

Diagnostic aids Biopsy history and physical examination

Relation to systemic disease None

Differential diagnosis Hemangioma nevi.

Therapy Obliteration of lesion by electrodesiccation

INDEX

Boldface page numbers indicate principal discussion of entity

Boldface page numbers indicate principal discussion of entity

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